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An Evaluation of Novice Teachers' Perceptions Regarding Teacher Induction and Teacher Leadership

Beth J. Bergren-Mann
St. Cloud State University

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**An Evaluation of Novice Teachers' Perceptions Regarding Teacher Induction
and Teacher Leadership**

by

Beth Mann

A Dissertation

Submitted to the Graduate Faculty of

St. Cloud State University

in Partial Fulfillment of the Requirements

for the Degree of

Doctor of Education

in Educational Administration and Leadership

November, 2016

Dissertation Committee:
Dr. John Eller, Chairperson
Dr. John Hoover
Dr. Kay Worner
Dr. Roger Worner

Abstract

Background

Classroom teachers have the most influence on student learning (Goldrick, 2009). In order for new teachers to be effective, they require support through comprehensive induction programs during the first three years of teaching (Stanulis & Floden, 2009). Induction and enculturation will happen with or without a formal program, and states and school districts have the opportunity to be at the forefront, developing quality, comprehensive systems of support that will set the stage for a life-long career of effective teaching (Feiman-Nemser, 2001).

Problem

In examining the literature on a leadership pathway for novice teachers, there appears to be little information on the inclusion of teacher leadership components in induction programs. Few studies reporting on comprehensive, systematic teacher leadership pathways include specific leadership components for novice teachers in their first three years of teaching.

Purpose

The purpose of the study was to examine novice teachers' awareness, beliefs, and perceptions regarding inclusion of, and participation in, a teacher leadership pathway. The goal of the research was to investigate: (1) development of teacher leadership, (2) attributes novices perceive they possess and (3) leadership roles and opportunities in which novice teachers are engaged and the subsequent benefits. Findings from the study were aimed to contribute to research that supports cultivating teacher leadership early and comprehensively. A quantitative research study was determined to be the most effective design for gathering comprehensive feedback from novice teachers in numerous Minnesota school districts.

Findings

[I]t is clear that most induction programs neglect to include a leadership pathway for novice teachers, often times preparing teachers for survival when schools are complex and in need of constant reform (Moir & Gless, 2001). Instead, these programs must also have as part of their vision a new image of the successful teacher whose leadership capacity is developed from the moment the teacher enters a classroom. Induction programs have the potential to become one of the most powerful forces for educational change and professional renewal in the history of public education. The opportunity is there, and the most effective programs will be those that clearly recognize this potential (Moir & Gless, 2001, p. 111).

Key Search Words: Novice, Teacher, Induction, Minnesota, School, Leadership, Leaders, Development, Teaching, Training, Professional, Effectiveness

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Dedication

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Chapter I: INTRODUCTION

The Importance of Teacher Induction

In P-12 classrooms, it is teachers who have the most influence on student learning. “Over 200 studies have shown that the only way to improve student learning is with a knowledgeable and skillful teacher” (Breux & Wong, 2003, p.23). Through teachers’ planning, instruction, and assessing, they influence how much and what students learn (Goldrick, 2009). According to Wong (2005), the better the teacher engages students, the more successfully students will achieve. Yet, when districts hire teachers who are new to the profession, they cannot expect them to be as effective as their experienced peers, even with quality pre-service preparation. Pre-service preparation is only the start of new teachers’ development, as they continue to gain necessary skills and knowledge on the job, often experiencing a sharp learning curve in their early years of teaching (Feiman-Nemser, 2001). In light of this, the importance of a strong induction process for novice teachers ensues.

While there are many definitions of induction for novice teachers, Wong (2004) establishes the standard definition for purposes of the study. He wrote: “Induction is a process—a comprehensive, coherent, and sustained professional development process—that is organized by a school district to train, support, and retain new teachers and seamlessly progresses them into a lifelong learning program” (p. 42).

There are essential components that characterize quality induction programs, which affect teacher effectiveness and student achievement. Unfortunately, novice teachers receive different induction processes and programs depending upon the school district in which they receive employment. In a New Teacher Center’s policy report, Goldrick, Osta, Barlin, and Burn (2012)

reported that, while half of states require new teachers to participate in supportive induction programs, the requirements of those programs vary widely. Recommendations for states regarding induction support include developing local accountability structures with an emphasis on program improvement and measurement of outcomes, dedicating state funding for program evaluation, surveying all novice teachers about the quality of their induction programming, and conducting site visits of programs where leaders and new teachers are interviewed (Goldrick et al., 2012).

Researchers and educational authorities have identified essential induction program components, which include teacher leadership participation for novice teachers. According to Stanulis, Burrill and Ames (2007), teacher leadership should be an essential focus in supporting new teachers, “As we see induction, the primary goal is to prepare strong teachers who participate in a community of educators and over time become leaders in their schools, districts, and the broader educational community” (p. 137). However, research reviewed on the creation of a leadership pathway for novice teachers identified numerous barriers to that pathway such as administrators understanding the leadership rationale and a working teacher leadership definition, which uses that knowledge to open access to leadership (School Leadership for the 21st Century Initiative, 2001). These obstacles include current system structures and beliefs of administrators regarding the conception of novice teachers as leaders. Other barriers include perceptions that only a few privileged educators should attain leadership and the failure by novice teachers to view themselves as leaders or assume positions of leadership (O’Hair and Odell, 1995).

Many studies have identified the needs of novice teachers, and districts' awareness of the data informs the learning agenda and creation of comprehensive induction systems. "They embrace issues of curriculum, instruction, assessment, management, school culture, and the larger community. They go well beyond maintaining order, which most perceive as the primary concern of beginning teachers" (Feiman-Nemser, 2003, p. 2). Along with needs identified by new teachers, district leaders have the opportunity to create a positive culture and set professional norms through the novice teachers they hire. "...[N]ovices will feel supported by schools when they make assignments that fit new teachers' backgrounds and interests, provide easy access to resources and practical expertise, and offer regular opportunities for substantive talk about teaching and learning" (Feiman-Nemser, 2003, p. 4).

Along with social and emotional needs—and the desire to fit into a school culture—new teachers with a desire to collaborate and network with other novices and veteran teachers. According to Stanulis et al. (2007), beginning teachers yearn to work together in collaborative networks to share innovative practices and find their collective voice. All of these components of support for new teachers are critical to comprehensive induction programs.

With the goals of retaining quality teachers and improving their effectiveness, researchers outline the components of comprehensive induction programs that affect novice teachers and the students with whom they work (Fletcher, Strong, & Villar, 2008). According to the New Teacher Center (NTC), one of the critical induction components is the availability of an instructional mentor or coach to work with a novice teacher (American Association of State Colleges and Universities, 2006). The assignment of instructional coaches, or mentors, provide invaluable support for novice teachers as affirmed by Moir and Gless (2001) when they wrote that, "...no

technology, no curriculum, no standardized structures can substitute for the power of a knowledgeable and skillful veteran to move a novice teacher to ambitious levels of teaching” (p. 112).

With mentoring at the core of comprehensive programs and additional essential elements established, researchers recommend multiyear programming or sustaining induction over a period of years (Wong, 2004 & 2005; Feiman-Nemser, 2001). “By most accounts, new teachers need three or four years to achieve competence and several more to reach proficiency” (Feiman-Nemser, 2003, pp. 2-3). Within a multi-year induction program, new teacher program administrators must also develop the capacity for novice teachers to become leaders from the first day of teaching and well into their experienced years (Moir & Gless, 2001).

Novice teachers are not finished products and need time to acclimate to a very complex profession, requiring support to accelerate their teaching skills as quickly as possible. Novice teachers who do not receive support through comprehensive induction programs will require three to seven years of teaching to achieve their maximum effects on student learning (Stanulis & Floden, 2009). School districts do not have the latitude to allow new teachers multiple years to become effective teachers. Data reveal that new teachers require support through comprehensive induction programs throughout the first three years of teaching.

Statement of Problem

Classroom teachers have the most influence on student learning (Goldrick, 2009). In order for new teachers to be effective, they require support through comprehensive induction programs during the first three years of teaching (Stanulis & Floden, 2009). Research strongly supports that teacher leadership should be an essential focus in supporting new teachers during

induction (Stanulis et al., 2007). Teacher leadership "...is about mobilizing the still largely untapped attributes of teachers to strengthen student performance at ground level and working toward real collaboration, a locally tailored kind of shared leadership, in the daily life of the school" (School Leadership for the 21st Century Initiative, 2001, p. 4).

Few studies reporting on comprehensive, systematic teacher leadership pathways include specific leadership components for novice teachers in their first three years of teaching. Even more strikingly, various stakeholders define teacher leadership differently and often do not include novices when considering these qualities. Essential components exist that characterize quality induction programs, which impact teacher effectiveness and student achievement. Unfortunately, novice teachers receive different induction processes and programs depending upon the school construct in which they are employed.

Schools experience serious challenges as beginning teachers leave the profession before they can develop fully as high-quality teachers. "As many as 14% of teachers quit after the 1st year, with numbers rising as high as 50% leaving within 5 years of taking their first teaching position" (Stanulis & Floden, 2009, p. 112). While there are other factors affecting teacher retention in addition to induction, comprehensive support for new teachers is essential and has the capability to set the expectations for novices as collaborative, life-long learners (Australian Institute for Teaching and School Leadership, 2014). With attrition of new teachers affecting large, urban, and high poverty districts more frequently than suburban or outstate schools, all district leaders' attention is likely to focus on the need for effective teachers, which correlates with student learning (Ingersoll, 2004). The data reveal that quality, comprehensive induction programs not only increase retention of new hires, but also accelerate the effectiveness of new

teachers by “...fast-tracking their progress to exemplary teachers with the ability to positively impact student achievement” (Moir, 2009, p.16).

In addition to accelerating the effectiveness of novice teachers, growing evidence exists that comprehensive induction programs exert a positive impact on student learning. “...William Sanders (1996) concluded that the children who had the most effective teachers 3 years in a row posted academic achievement gains that were 54% higher than the gains of children who had the least effective teachers 3 years in a row” (Wong, 2004, p. 18). For novice teachers to be effective, they require quality induction programs and leaders who remove barriers.

Research on the creation of a leadership pathway for novice teachers identified numerous barriers such as administrators’ understanding the rationale and a working teacher leadership definition that uses induction ideas to open access to leadership (School Leadership for the 21st Century Initiative, 2001). These obstacles include current system structures and beliefs of administrators regarding the conception of novice teachers as leaders. Other barriers include perceptions that only a few privileged educators should attain leadership and the failure by novice teachers to view themselves as leaders or assume positions of leadership (O’Hair and Odell, 1995). In this regard, along with building administrators, institutions of higher education can also play a role in supporting new teachers. “...induction programs can represent a new conceptualization of teacher development in which the responsibility for teacher learning is shared across traditional institutional boundaries by linking university teacher preparation with inservice learning” (Moir & Gless, 2001, p. 110).

While novice teachers strive to be as effective as quickly as possible, they also try to fit into their new environment and become part of the culture, as highlighted by Ingersoll and

Strong (2011). Because new teachers are often isolated from their colleagues, they become entrenched in a “sink or swim” mode of teaching (Ingersoll & Strong, 2011). Novice teachers require more than survival skills as they manifest substantial learning once they receive employment in the complex field of teaching (Wong, 2005). District leaders, specifically principals, play a key role in guiding novice teachers and implementing induction processes that support fledgling teachers. Principals must commit to comprehensive induction, lead the building program, participate in coaching training alongside instructional coaches, observe new teachers, and support induction stakeholders (Wong, 2004).

It is critical that novice teachers receive comprehensive support, to help them transition from pre-service to in-service teaching, while also retaining them well beyond the years of induction (Haygroup, 2014).

Purpose of Study

There are ways to cultivate leadership in novice teachers: leadership practices that novice teachers can attain that also benefit the education system and stakeholders. Information gleaned from the literature review reveals that most induction programs neglect to include a leadership pathway for novice teachers, often preparing fledgling teachers for survival when schools are complex and in need of constant reform (Moir & Gless, 2001). “Instead, these programs must also have as part of their vision a new image of the successful teacher whose leadership capacity is developed from the moment the teacher enters a classroom” (Moir & Gless, 2001, p.111).

The purpose of the study was to examine novice teachers’ awareness, beliefs, and perceptions regarding inclusion of, and participation in, a teacher leadership pathway. The goal of the research was to investigate: (1) development of teacher leadership, (2) attributes novices

perceive they possess, (3) teacher leadership roles and opportunities in which new teachers are engaged, (4) and subsequent benefits of leadership for new teachers and the school districts in which they work. Findings from the study are aimed to contribute to research that supports cultivating teacher leadership early and comprehensively.

Research Questions

The study had four guiding research questions, directly aligned with the Framework for Teacher Leadership Elements (Figure 1.1). These guiding research questions are the following:

1. What strategies or techniques do novice teachers report are utilized in developing their teacher leadership?
2. What select leadership attributes do novice teachers report they possess after two years of involvement in an induction program?
3. What teacher leadership roles do novice teachers report are present in the first two years of teaching and what is their level of engagement in these leadership opportunities?
4. To what degree do novice teachers report that their engagement in leadership opportunities benefits them and their school districts?

Conceptual Framework

The conceptual framework for the study (Figure 1.1 “Framework of Teacher Leadership Elements”) was based on the review of literature related to a leadership pathway for novice teachers. The framework proposes to lead to successful teacher leadership for all teachers, with a specific focus on novice teachers in their first three years of teaching. Three elements make-up

the framework, each includes detailed subcategories of recommendations for a teacher leadership pathway. The three elements are:

1. cultivating teacher leadership through seven components;
2. identifying and creating roles and opportunities,
3. and communicating benefits.



Figure 1.1 Framework of Teacher Leadership Elements

The following excerpts of research were key in building each element comprising the Framework of Teacher Leadership Elements (Figure 1.1). A more in-depth look of each element and its research is provided in Chapter two.

Framework Element One: Components of Cultivating Teacher Leadership. The seven components of cultivating teacher leadership include: (1) All teachers as leaders; (2) administrative support; (3) teacher leadership knowledge, skills and dispositions; (4) time to lead; (5) supportive culture; (6) collaboration with colleagues; and (7) professional development.

All teachers as leaders. Positioning novice teachers on a pathway to leadership is cultivated by seven components. The first leadership component is the viewing all teachers as leaders. Education has evolved to support an inclusive view that all teachers have the potential to lead, including novice teachers (Carver & Meier, 2013). As a result of this shift in perspective, teacher leadership is a professional goal that all teachers can attain as they continue to build their instructional practice (Ibid).

Administrative support. A second teacher leadership component involves support from administrators. Berry and Wieder (2013) asserted that even when administrators view teachers as potential leaders, the system usually lacks a systematic and consistent effort to promote teachers as leaders. When Berry (2014) surveyed 50 administrators from more than 30 school districts that secured federal grants to develop teacher leadership through innovative practice, he found most of the respondents interviewed could not imagine teachers leading in positions other than traditional instructional coaches or as peer reviewers. However, Lambert (2003) insisted, "...that all teachers have the right, capability and responsibility to be leaders, therefore, the major

challenge before us is not to identify who is and who is not a teacher leader but to create a context that evokes leadership from all teachers” (p. 422).

Teacher leadership knowledge. The third component in the framework includes awareness and development of teacher leadership knowledge, skills and dispositions. According to Lemlech and Hertzog (1998), this awareness and development starts in pre-service preparation. If teachers are to be successful in today’s schools, teacher leadership knowledge, skills, and dispositions should begin to be developed within pre-service training (Lemlech & Hertzog, 1998). “To prepare beginning teachers for (teacher leadership), teacher preparation programs must introduce the concept of teacher leadership in their courses and provide these novices with a mental framework for approaching teacher-related tasks and opportunities to develop as teacher leaders” (Bond, 2011, p. 294).

Once novice teachers assume full-time, in-service positions, Carver and Meier (2013) emphasized that their knowledge of teacher leader skills prepares them to assume leadership roles more quickly. First, communication skills must be effective, as leaders regularly interact with others, share ideas, ask questions, discuss information and actively listen (Bond, 2011). In addition, teacher leaders are often described as “movers and shakers”, as they possess a reform or improvement-oriented perspective (Carver & Meier, 2013). Along with being reform minded, teacher leaders seek solutions to challenges, build confidence in others, and are reliable, truthful, open-minded, flexible, optimistic, resilient, and intrinsically motivated (Bond, 2011). Most importantly, Bond (2011) wrote that teachers engage in teacher leadership because they want to improve instruction and student achievement. Finally, teacher leadership skills develop when pre-service and novice teachers refine particular dispositions. When teacher leaders are

encouraging and supportive of their colleagues, accept challenges, engage in decision-making, and believe they can make a difference in the school environment, they are more effective leaders (Lemlech & Hertzog, 1998).

Time to succeed. A fourth leadership component is the recognition that novice teachers require time to succeed as teacher leaders, but often are not afforded this necessity (Berry, 2014). “Unfortunately, even in 2014, school schedules allow little time for teachers to design and lead lesson studies, conduct action research, launch virtual learning communities, advance school-community partnerships, and develop and score new student assessments” (Berry, 2014, p. 3). Yet, “the CTQ [Center for Teaching Quality] has supported 23 ‘teacherpreneurs’ over the last four years, actually paying school districts to reduce teachers’ loads and free up their time to incubate and execute their own ideas and advance their profession” (Berry, 2014, p.3).

Supportive teacher leadership culture. A fifth essential component of cultivating leadership is the creation of a supportive teacher leadership culture. According to Carver and Meier (2013), colleagues were either clearly supportive or unsupportive of teachers’ leadership work. “Supportive colleagues acted like cheerleaders, setting high expectations and demanding strong performance, but also understanding when things didn’t go well” (Carver & Meier, 2013, p. 183). Carver and Meier (2013) added that these supportive colleagues were often involved in co-planning and teaching and encouraged new teachers to be creative, which resulted in more confidence in the ability to be a teacher leader. In contrast, “...teachers in the unsupportive category were more likely to retreat to their classrooms than to actively engage in leadership activities” (Carver & Meier, 2013, p. 183). In order to gain support from veteran teachers,

novices described the need to position themselves as competent in front of everyone with whom they interacted, from students to colleagues to administrators (Carver and Meier, 2013).

Collaboration with colleagues. A sixth component of cultivating leadership is collaboration with colleagues. Harris and Lambert (2003) wrote that a significant element in the development of leadership involved collaboration or “...the notion of learning together, and the construction of meaning and knowledge collectively and collaboratively. Such leadership permits opportunities to surface and it mediates perceptions, values, beliefs, information and assumptions through continuous conversations” (p.6).

Ongoing professional development. The seventh component in cultivating teacher leadership is professional development, or ongoing learning (Fullan, 1993). Induction programs can provide opportunities for new teachers to learn from each other through peer coaching. “Through the assistance of a peer, teachers can focus and analyze their teaching practices” (Lemlech & Hertzog, 1998, p. 12). Likewise, skillful participation in a professional community increases leadership because “such work embraces a shared vision, inquiry, dialogue, reflection and a focus on learning” (Lambert, 2003, p. 426). Teachers who learn from each other are more likely to be leaders and so a learning community is at the center of a high leadership capacity school (Lambert, 2003). Career-long learning not only influences the novice teacher’s effectiveness in the classroom, but also places the educator on a pathway to leadership (Fullan, 1993).

Framework Element Two: Identifying and Creating Roles/Opportunities. A second element of a teacher leadership framework includes identifying and creating roles and opportunities for novice teachers to lead. New teacher leaders engage in various types of

activities that build leadership skills throughout their careers. Because novices begin as instructional leaders with their students, a natural first step for those novices is developing their teaching expertise and confidence (Bond, 2011). As expertise in teaching continues to develop, novices become more confident and are more likely to engage and share their work with colleagues (Carver & Meier, 2013). That engagement with teaching colleagues results in novice teachers reflecting and examining their teaching practices and developing their own efficacy and professionalism (Lemlech & Hertzog, 1998).

In addition to engagement with colleagues, novice teacher leaders observe their peers and engage in reciprocal mentoring. “What if teacher-evaluation systems placed a premium on teachers' abilities to spread effective practices among colleagues within and beyond their schools” (Berry, 2014, p. 3)? Berry (2014) suggested that administrators should provide more opportunities for novices to engage in peer observation, followed by reciprocal mentoring where educators exchange high-quality feedback in instruction and student learning—all building teacher leadership skills and advancing the practice of teaching.

A final role where novice teachers can lead involves taking part in career-long learning opportunities where emerging leaders take part in various types of activities that build leadership skills throughout their careers. Teacher leaders are agents for reform and thus life-long learners (Fullan, 1993). Career-long learning not only influences novice teachers’ effectiveness in the classroom, but also places the educator on a pathway to leadership (Fullan, 1993).

Framework Element Three: Communicating Benefits. The final element of the teacher leadership framework is communicating benefits. When novice teachers engage in teacher leadership activities, students, colleagues, administrators, parents and districts experience

myriad benefits. Of the many benefits that teacher leadership provides, one that has careerlong outcomes for teachers and the entire school system is that of school improvement. Lambert (2003) wrote that teacher leaders are energized by working with their colleagues and find their inspiration in the daily challenges of teaching and school improvement.

In addition to school improvement, teacher leadership is increasingly regarded as strategic to reculturing schools for increased student achievement (Carver & Meier, 2013). “As teachers learn to talk about teaching in specific and disciplined ways and to ask hard questions of themselves and others, they create new understandings and build a new professional culture” (Feiman-Nemser, 2001, p. 1043). Novice teachers who engage in professional discourse deepen knowledge of curriculum, sharpen questioning skills and become critical thinkers (Feiman-Nemser, 2001). “Over time, they develop a stronger sense of themselves as practical intellectuals, contributing members of the profession, and participants in the improvement of teaching and learning” (Feiman-Nemser, 2001, p.1043).

In section closing, when teacher leadership is part of a school culture, schools become more democratic and the entire system benefits (School Leadership for the 21st Century Initiative, 2001).

Research Design

Quantitative research was employed by surveying third year teachers’ perceptions of teacher leadership factors that affected the creation of successful teacher leadership pathways for novice teachers. According to Slavin (2007), “in quantitative research, researchers collect numeric data, or information, from individuals or groups and usually subject these data to statistical analyses to determine whether there are relationships among them” (p. 7).

The framework components and the research questions were aligned using a matrix, “Framework and Survey Question Matrix” (Appendix A). The matrix served as the foundation for building the study instrument. The purpose of the matrix was to align the statements in the research questions with the research on teacher leadership for novice educators (Roberts, 2010). Research questions were listed and elements from the conceptual framework were aligned under each question. Based on the matrix, a quantitative research study was determined to be the most effective design for gathering comprehensive feedback from novice teachers in numerous Minnesota school districts. The matrix (elements of framework and questions) served as the basis of a quantitative, online questionnaire, distributed in an email message.

Assumptions of Study

The following were assumed to be factual when conducting primary research for the study:

- Participants will respond to questionnaire statements openly and honestly.
- Responses provided by participants will accurately reflect their professional opinions.
- The study sample is representative of novice teachers who completed two years of involvement in a school district induction program and two years of teaching.

Delimitations

According to Mauch & Birch, (1998), delimitations are factors that can be controlled by the researcher. They include the study’s parameters, variables considered, and variables not considered. The factors that were under my control, as defined and used in the study, included the following:

- Only third year teachers in Minnesota public schools were surveyed as part of the study due to the fact that first and second year teachers would not have had access to as many opportunities to develop their teacher leadership skills as third year teachers.
- The sample school districts involved in the study were selected from among Minnesota school districts that provide a minimum of two years of induction programming to novice teachers. Research suggests that school districts that provide multiyear induction programs are more likely to build leadership skills among novice teachers.

Definitions of Terms

The following expressions or terms are used throughout the research paper, and defined for purposes of this particular study. Definitions for each term are based on scholarly research.

Induction: A process—a comprehensive, coherent, and sustained professional development process—that is organized by a school district to train, support, and retain new teachers and seamlessly progresses them into a lifelong learning program (Wong, 2004, p. 42).

Novice or New Teacher: A teacher in his or her first three years of teaching.

New to the Profession Teacher: A teacher who is just entering the profession of teaching.

Pre-service Teaching or Preparation Education: Education, training and teaching provided to teacher candidates before they have received licensure (Feiman-Nemser, 2003).

In-service Teaching: Teaching when licensed after graduating from a pre-service preparation program, where teachers acquire subject-matter knowledge, study the learning process and students' cultural backgrounds, and acquire a beginning repertoire of approaches to planning, instruction, and assessment (Feiman-Nemser, 2003, p. 2).

Orienting or Orientation: Prior to the start of a school year, one or multiple training sessions that are provided to novice teachers who are new to the district. The sessions often orient new teachers to the district policies and procedures (Birkeland & Feiman-Nemser, 2012).

Buddy Teacher or Mentor: An experienced teacher who provides support for a new teacher that is designed to answer questions and assist them during through the survival stage of teaching (Wong, 2005).

Instructional Coaching or Mentoring: Educators who provide guidance on effective practices in teaching, often with release time from their teaching roles. The instructional coach or mentor engages in sharing advice, prompting reflection, demonstrating quality teaching practices, observing and providing feedback, decreasing isolation, helping to set goals, modeling professionalism, exchanging ideas, and keeping the passion for teaching alive (Moir, 2005).

Enculturation: The integration of new teachers into the school (Lambert, 2003).

Collaborative Networks: New and veteran teachers working together with the outcome of increasing student achievement by examining daily practices (HayGroup, 2014).

Teacher Leadership: Mobilizing the still largely untapped attributes of teachers to strengthen student performance at ground level and working toward real collaboration, a locally tailored kind of shared leadership, in the daily life of the school (School Leadership for the 21st Century Initiative, 2001, p. 4).

Teacherpreneurs: New teacher leaders who work outside of the lines and mobilize their colleagues, ultimately transforming the profession (Berry & Weider, 2013).

Reculturing: Creation of new understandings and building a new professional culture (Feiman-Nemser, 2001).

Study Outline

Chapter one provided an introduction to the study, statement of the problem, purpose of the study, research questions, conceptual framework, assumptions of the study, delimitations, research design, and definitions of terms. Chapter two will present a review of related literature in three major sections: background of induction, essential components of quality induction programs, and development of leadership capacity in novice teachers. Chapter three describes the methodology of the study including an introduction, description of participants, human subject approval, instrument(s) for data collection and analysis, research design, procedures and timeline, and a summary. Chapter four summarizes results and provides answers to the research questions. Finally, Chapter five will provide conclusions and recommendations.

Chapter II: LITERATURE REVIEW

In the following literature review, information is summarized related to the topic of comprehensive induction programs as a passageway to leadership for novice teachers. In the review of related literature, three themes emerge. The first theme is the background of induction, followed by essential components of quality induction programs, and concluding with developing leadership capacity in novice teachers.

The Impact of Teacher Induction

Teachers in P-12 classrooms have the most influence on learning for students (Goldrick, 2009). “Over 200 studies have shown that the only way to improve student learning is with a knowledgeable and skillful teacher” (Breaux & Wong, 2003, p.23). Through their planning, teaching, and assessing, teachers influence how much and what students learn (Goldrick, 2009). According to Wong (2005), the better the teacher engages students and instructs, the more successful students will be. Yet, when districts hire teachers new to the profession, they cannot expect them to be as effective as their experienced peers, even with quality pre-service preparation (Birkeland & Feiman-Nemser, 2012; Goldrick, 2009). According to Feiman-Nemser (2001), novice teachers are not finished products and need time to acclimate to a very complex profession. “...preservice preparation is the start of a new teacher’s development, as they continue to gain necessary skills and knowledge on the job, often experiencing a sharp learning curve in their early years of teaching” (Birkeland & Feiman-Nemser, 2012, p.109). According to Stanulis and Floden, (2009), novice teachers require support to accelerate their teaching as quickly as possible. Stanulis and Floden also found that novice teachers who do not receive support through comprehensive systems require three to seven years of teaching to reach their

maximum impact on student learning. However, school districts do not have years to wait for a new teacher to become effective with students. New teachers require support through comprehensive induction programs during the first three years of teaching (Stanulis & Floden, 2009).

The Need for a Comprehensive Process

Although induction programs are often referred to as mentoring, it is only one component of support for new teachers (Wong, 2005). “Induction is a process-a comprehensive, coherent, and sustained professional development process-that is organized by a school district to train, support, and retain new teachers and seamlessly progresses them into a lifelong learning program” (Wong, 2004, p. 42). Feiman-Nemser (2001) viewed induction as a distinct phase of learning that “stand[s] as a key juncture of learning, growth, and support for beginning teachers” (Paine, Pimm, Britton, Raizen, & Wilson, 2003, p. 15). At this juncture, the quality of support and learning is critical (Johnson, 2004). Induction includes many components of support such as institutional commitment, program vision, professional development, formative assessment, proximity or buddy mentoring, and instructional coaching (Moir & Gless, 2001).

Historically, many districts provide “buddy” mentors to new teachers, excluding other components that accelerate teachers’ effectiveness, such as instructional coaching (Feiman-Nemser, 2001). According to Feiman-Nemser (2001), mentoring may also happen in an informal way by a well-meaning colleague “adopting” a new teacher and answering his or her questions. Buddy mentoring, as a solo component of induction, requires little funding, low staffing, and is uncomplicated to implement (Stanulis & Floden, 2009). This type of support, in isolation of other induction components, lacks the backing of research as a strategy for improving the

practice of new teachers; rather, it is designed to help novices with survival (Wong, 2005).

Stanulis and Floden reported that comprehensive systems of support accelerate new teachers' learning and minimize the time it takes for beginning teachers to have an impact on student achievement.

Even with high quality pre-service programming and robust field experiences, novice teachers need additional instruction and experience once they are employed in the complex field of teaching (Wong, 2005).

Beginning educators, on average, are less effective than their more experienced peers. Research has consistently found a positive relationship between years of teaching experience and higher student achievement, with teachers who have five or more years in the classroom demonstrating greater effectiveness. (Goldrick, 2009, p. 1)

A significant portion of teaching needs to be acquired on the job and this learning takes more time than student teaching and early field experiences can offer (Ingersoll & Strong, 2011).

According to Wong (2005), most companies, clinics, hospitals, and organizations have some kind of training program for their new employees and they invest up front to retain and accelerate the effectiveness of their employees. For example, doctors spend years as residents, engineers are assigned mentors during the first year of employment, and judges attend judicial college before beginning their official role (Wong, 2005). "Teachers want training; they want to fit in; and they want their students to learn and achieve. For the most part, education has failed to recognize what industries have always recognized—training matters. Formalized sustained training matters" (Wong, 2005, p. 45). Therefore, it is critical that novice teachers receive comprehensive support to help them transition from pre-service to effective in-service teaching well beyond the years of induction (Haygroup, 2014).

Induction and Retention

Schools face serious challenges as beginning teachers may leave the field before they can develop fully as high-quality teachers. “As many as 14% of teachers quit after the 1st year, with numbers rising as high as 50% leaving within 5 years of taking their first teaching position” (Stanulis & Floden, 2009, p. 112). If teachers are leaving the profession at the five-year mark, and that is the point when they are effective and having a positive effect on student achievement, then districts are losing teachers just when they should be ready to soar.

...it can take 10,000 hours to achieve mastery within a profession and it is here that the full force of attrition and retirement trends impact: if new teachers are not remaining in the profession for the time necessary to develop significant professional capital at the same time as experienced members of the profession retire, then the collective expertise of the broader profession will be slowly eroded. This puts the learning and development culture of the school at the coalface of improving teacher quality to drive student outcomes. (Hargreaves & Fullan, 2012, p.10)

According to the American Association of State Colleges and Universities (2006), districts invest large amounts of funding for new hires—including recruiting, hiring, orienting, and providing induction programs for up to the first three years of teaching. The financial cost of teacher turnover adds to the problem, draining resources from already tight budgets.

While there are financial concerns with losing teachers, more importantly, teacher turnover has a negative effect on students and on the lives of the novice teachers the school systems lose (Ingersoll & Smith, 2004). “Every teacher who leaves after only a few years takes with them vital classroom experience, and represents a missed opportunity to establish lasting relationships between teachers and students, teachers and parents, and among teaching professionals” (Moir, 2005, p. 2). Conversely, there also is evidence that induction programs save money for school districts. “It has been estimated that for every \$1.00 invested in induction,

there is an estimated payoff of nearly \$1.50” (American Association of State Colleges and Universities, 2006, p. 2). Research demonstrates that well-designed induction support can improve new teachers’ effectiveness (Fletcher, Strong & Villar, 2008) and increase the likelihood of retention (Smith & Ingersoll, 2004). While other factors affect retention in addition to induction, comprehensive support for new teachers is essential and has the capability to set the expectations for novices as collaborative, life-long learners (HayGroup, 2014). With attrition of new teachers affecting large, urban, and high poverty districts more than suburban or outstate schools, all district leaders’ attention is likely to focus on the need for effective teachers, which correlates with student learning (Ingersoll, 2004).

Comprehensive induction systems provide a return on investment by accelerating teacher growth (Stanulis & Floden, 2009). The data show that quality, comprehensive induction programs not only increase retention of new hires, but also accelerate the effectiveness of new teachers by “...fast-tracking their progress to exemplary teachers with the ability to positively affect student achievement” (Moir, 2009, p.16). According to the New Teacher Center (2012), this is achieved through systematized, comprehensive induction programs that include one-on-one instructional coaching, or mentoring, preferably over the first two years of a new teacher’s career. Moir (2009) notes that the New Teacher Center’s model suggests “...individual coaching sessions, (where) mentors help new teachers set professional goals, plan lessons, analyze student work, and reflect on progress. Mentors may teach a lesson while the new teacher observes” (Moir, 2009, p.16). A growing body of research indicates that comprehensive induction has a positive effect on novice teachers’ effectiveness.

Beginning teachers who participated in some kind of induction performed better at various aspects of teaching, such as keeping students on task, developing working lesson

plans, using effective student questioning practices, adjusting classroom activities to meet students' interests, maintaining a positive classroom atmosphere, and demonstrating successful classroom management. Finally, for student achievement, most of the studies also show that students of beginning teachers who participate in some kind of induction had higher scores, or gains, on academic achievement tests. (Ingersoll, 2012, p.51)

It is undeniable that students are most successful with educators who are effective; it is also certain that comprehensive, coherent, and sustained professional development programs shape effective teachers (Wong, 2005). Additional research makes the case for the positive effect that comprehensive induction programming has on novice teachers and, subsequently, their impact on students.

Induction and Student Achievement

Growing evidence from the field suggests that comprehensive induction programs have a positive impact on student learning. In fact, effective novice teachers are critical to the achievement of students, as "...William Sanders (1996) concluded that the children who had the most effective teachers 3 years in a row posted academic achievement gains that were 54% higher than the gains of children who had the least effective teachers 3 years in a row" (Wong, 2004, p.18). Similar to this research, "...Hanushek, Kain, and Rivkin (2001) found that "the importance of having an effective teacher instead of an average teacher for 4 or 5 years in a row could essentially close the gap in math performance between students from low-income and high-income households" (Wong, 2004, pp. 41-42).

Induction leaders have long sought research that could make the case for funding and institutionalizing robust induction-research that aided in decision making regarding the creation of induction programs that have an impact on student achievement. The New Teacher Center (NTC) in Santa Cruz, CA took advantage of opportunities to conduct four quasi-experimental

studies using natural data (New Teacher Center, 2012). Three of the four studies from the New Teacher Center show the effectiveness of induction in increasing student achievement.

First, Mathematica Policy Research's study of comprehensive teacher induction found a sizeable and statistically significant impact on student achievement (Fletcher, Strong, & Villar, 2008). Mathematica's randomized controlled trial of comprehensive teacher induction, funded by the U.S. Department of Education's Institute of Education Sciences, shows a sizeable and statistically significant impact on student achievement in mathematics and reading (Fletcher et al., 2008). Beginning teachers who received two years of comprehensive induction support produced greater student learning gains—the equivalent of a student moving from the 50th to the 58th percentile in mathematics achievement and the 50th to 54th percentile in reading (Fletcher et al., 2008).

The second study draws on two years of achievement data from three Local Education Agencies (LEAs) associated with the NTC. According to Fletcher and Strong (2009), two LEAs adopted the full NTC model for one year only; the third LEA used the model over the full two years, allowing for a comparison of the designed NTC model against programs modified according to LEA needs and standards. One LEA moved to a high caseload ratio of 1:35 for mentors in the second year, severely reducing contact time; the second LEA adopted a buddy system, assigning new teachers a colleague with a full teaching load. Hierarchical linear modeling analyses of LEA gain scores was applied to each case, controlled for student poverty, ethnicity, and English learner status (Fletcher & Strong, 2009). From this analyses, the two-year LEA demonstrated significantly higher student gains for its new teachers, suggesting that two-

year support from a full-time mentor paired with reasonable caseloads, as required by the NTC model, is critical (Fletcher & Strong, 2009).

The third study, conducted in the Boston Public school system, tested the importance of a core NTC Model component—the assignment of a fully released mentor (Strong, 2006). Strong found that full-time mentors supported some teachers, while others were assigned full-time teachers from their own schools. All mentors received the same training, although the selection criteria for full-time mentors were more rigorous (Strong, 2006). Strong reported that results exhibited significantly higher achievement gains in both 4th and 5th grade students for teachers receiving the full-time mentoring, suggesting that this is a critical component of the model. Although teachers were not randomly assigned to the two conditions, internal validity is high because no other supports existed to account for the differences (Strong, 2006). In addition, the group receiving full-release mentors was selected from those with the most challenging working conditions, a factor that works against the research hypothesis (Strong, 2006). It is clear that the quality of the novice teacher has an impact on student achievement. That quality correlates with the type and amount of support that is offered to new hires during the first three years of their career.

Induction's Alleviation of Novice Stress

While novice teachers are working to be as effective as quickly as possible, they are also trying to fit into their new environment and become part of the culture, as highlighted by the following research. Because new teachers are often isolated from their colleagues, they become entrenched in a “sink or swim” mode of teaching (Ingersoll & Strong, 2011). Others go further, arguing that new to the profession teachers “...often end up placed in the most challenging and

difficult classroom and school assignments—akin to a ‘trial by fire’ experience” (Ingersoll & Strong, 2011, p. 202). In these stressful environments, there is no period of acclimation, instead an expectation exists for new teachers to attain success from the first day of teaching (HayGroup, 2014). According to HayGroup (2014), novice teachers are navigating new curriculum, teaching full-time, figuring out their classroom management style, working with parents, handling administrative tasks, and building relationships with colleagues. “And unlike other professions...their newness does not change the fact that once they are in front of the class the effectiveness of their teaching has immediate impacts on the outcomes their students will achieve” (Haygroup, 2014, p. 12).

Induction and the Role of Administrator and Universities

Moir and Gless (2001) report that without support, many novice teachers are driven out of the system; however, induction can play an important role in enculturating new teachers into a system of support.

There is power in recognizing induction as a formal and informal process of socialization – it can perpetuate the status quo if new teachers are inducted into the school ‘as is’ or it can be a force for change if the process brings new teachers into a culture that is seeking to challenge and improve norms and practices. (Haygroup, 2014, p. 18)

New teachers will be inducted into a system with or without a formal program, but districts need to consider the consequences of leaving how that happens to chance (Moir & Gless, 2001). The first three years of teaching are an opportunity for districts to have control over how teachers become enculturated and change the professional norms and expectations, one new teacher at a time. District leadership, specifically principals, play a key role in supporting novice teachers and implementing induction supports.

While research establishes the importance of the teacher on the students' achievement, the involvement of the school principal in ensuring quality teaching is imperative. Wong (2004) writes that to accomplish this, effective administrators support novice teachers with quality induction programs. Support for new teachers is rarely successful without the involvement of building administrators—and they have to do more than assign a “buddy teacher” to a novice teacher and step away from overseeing the program (Ingersoll & Strong, 2011). Principals need to commit to comprehensive induction, lead the building program, take part in coaching trainings alongside instructional coaches, observe new teachers, and support all induction stakeholders (Wong, 2004). The principal “...allows new teachers to observe others, to be observed by others, and to be part of networks or study groups where all teachers share together, grow together, and learn to respect each other's work” (Wong, 2004, p. 41). Wong (2004) wrote that effective principals foster such experiences and have a deep understanding of the needs of novice teachers and those who work to support them. Principals play an important role in the induction process as they evaluate novice teachers and offer their own coaching support (Wong, 2005). It is critical that administrators support new teachers, as perceptions of inadequate support is one of the primary factors in new teachers' decision to leave a district (Ingersoll & Strong, 2011).

Outstanding administrator leaders have a deep understanding of the teachers and students they lead. They work with a firm conviction that all teachers have the potential to become effective teachers. They are eager to collaborate with their teachers and even teach them. They are active learners themselves, cultivating their own professional growth throughout their careers. Finally, they are role models, instilling a passion for learning in their teachers. (Wong, 2004, p. 53)

Those responsible for school leadership and policy can play a pivotal role in creating a quality induction program that can make a remarkable difference in novice teachers' fulfillment, development, retention, and impact on students (Stanulis & Floden, 2009).

Along with building administrators, institutions of higher education can also play a role in supporting new teachers. Traditionally, coordination between higher education's pre-service programs and those who lead induction systems in P-12 schools is lacking (Feiman-Nemser, 2001). According to Moir and Gless (2001), teacher preparation programs have much to offer their graduates as they secure full-time teaching positions and navigate the complexity of teaching. Increasingly, higher education is rethinking the preparation of teachers from four years to a seven-year process with support throughout pre-service and into the first three years of in-service teaching. "...induction programs can represent a new conceptualization of teacher development in which the responsibility for teacher learning is shared across traditional institutional boundaries by linking university teacher preparation with inservice learning" (Moir & Gless, 2001, p. 110). This work requires partnerships between universities and P-12 districts, which can serve to share expertise and resources across institutions.

...no point in the continuum has more potential to bring the worlds of the school and the academy together into a true symbiotic partnership than the induction stage. Universities need schools to help them prepare and induct beginning teachers. Schools cannot extend initial preparation through the early years of teaching unless they coordinate their efforts with providers of preservice education. (Feiman-Nemser, 2001, p. 1037)

According to Feiman-Nemser (2001), partnership between university and P-12 educators can create a coherent, systematic professional development program that extends from pre-service into in-service. This continuum of support provides an opportunity for educators to work together to address the needs of teachers and the effect they have on P-12 student achievement

(Wong, 2004). University faculty can “...extend the norms of collaboration and support into the induction years and as a result accelerate teacher development (Moir, 2004) so that novices could have an impact on student achievement earlier in their career” (Stanulis et al., 2007 p. 139).

Universities can also work with P-12 districts to align pre-service with in-service, ensure that induction is high quality and sustained, and assist in evaluating programs (American Association of State Colleges and Universities, 2006). “Mentoring and induction can bridge the gap between pre-service education and the classroom, and higher education institutions must be an important part of this picture (American Association of State Colleges and Universities, 2006, p. 4).

The research on the background of induction concludes that novice teachers require support through comprehensive induction programs. A working definition of induction from Wong was identified for the use of this literature review and highlights that induction is a comprehensive, coherent, and sustained professional development process. This process involves much more than the traditional “buddy mentoring” because beginning teachers, while less effective than their more experienced peers, require comprehensive support to accelerate their learning. Novice teachers leave the field of teaching at a high rate, but research demonstrates the positive effect comprehensive induction has on their effectiveness and student achievement.

New teachers often feel isolated and are enculturated with or without induction. Principals play a pivotal role in determining the types of enculturation novice teachers receive, as well as supporting novices by creating quality induction programming. Finally, partnerships between universities and P-12 systems can create a coherent, systematic professional development program that extends from pre-service into in-service.

Research reviewed has established that the quality of support and learning is critical for novice teachers. The quality of those experiences and interactions between beginning teachers and their colleagues can play a critical role in the success of novice teachers (Johnson, 2004).

Essential Components of Quality Induction Programs

As earlier research concludes, the conditions under which a novice teacher conducts the first years of teaching have a strong influence on the level of effectiveness that teacher is able to attain, how the teacher is enculturated into the school system, and whether or not they remain in the teaching profession (Ingersoll & Strong, 2011; HayGroup, 2014; Moir & Gless, 2001). Left on their own, "...novices stick to whatever practices enable them to survive whether or not they represent 'best' practice in that situation" (Feiman-Nemser, 2001, p. 1014). Induction and enculturation occur with or without formal programs, but states and school districts have the opportunity to be at the forefront, developing quality, comprehensive systems of support that will set the stage for a life-long career of effective teaching (Feiman-Nemser, 2001).

In today's school systems, the stakes are high and novice teachers need support beyond "buddy mentors" who answer questions and offer a pat on the back (Feiman-Nemser, 2001). According to Moir (2005), new teachers deserve more than short-term programs that help them survive and remain in the profession. Retaining new teachers is valued, but it is not the same as mentoring them with the goal of becoming effective and having an effect on their students' achievement (Ibid).

Most induction mandates do not rest on an understanding of teacher learning, a vision of good teaching or a broad view of the role formal induction can play in new teacher development. Often they lack the necessary resources to support effective programs. Even when formal programs exist, they may not help beginning teachers teach in ways that foster complex learning on the part of students. (Feiman-Nemser, 2001, p. 1031)

The first years of teaching are a critical phase in learning to teach; new teachers require a professional culture that supports their learning. According to Feiman-Nemser (2001), novice teachers rely on what they know from the practice of trial and error to work through pedagogy that helps them survive, without letting go of all the idealism that brought them to teaching in the first place. In addition, without systematized support, new teachers continue to depend on these strategies whether or not they represent best practice (Ibid).

...they must demonstrate skills and abilities that they do not yet have and can only gain by beginning to do what they do not yet understand (Schon, 1987). This places beginning teachers in a vulnerable position. Moreover, the work of teaching, itself complex, uncertain, and full of dilemmas, sharpens the paradox by reminding beginning teachers at every turn of what they cannot yet do. (Feiman-Nemser, 2001, pp.1027-1028)

To move beyond surviving, novice teachers require comprehensive systems of support, or induction programs during the first three years of their career (Stanulis & Floden, 2009).

Feiman-Nemser (2001) gives a global recommendation regarding central learning tasks for novice teachers that include: gaining local knowledge of students, curriculum, and school context; designing responsive curriculum and instruction; enacting a beginning repertoire in purposeful ways; creating a classroom learning community; developing a professional identity; and learning in and from practice. However, the support systems that are available to novice teacher vary widely across the country depending on state mandates and funding.

State and Federal Accountability

Induction programs for beginning teachers vary widely depending on the districts and states in which they are employed. In February 2012, the New Teacher Center (NTC) published a *Review of State Policies on Teacher Induction* that provides a comprehensive report on

induction policies in the country. The NTC developed ten policy criteria that they include in their trainings and utilized when assessing states' induction capacity:

1. Teachers Served: State policy should require that all teachers receive induction support during their first two years in the profession.
2. Administrators Served: State policy should require that all school administrators receive induction support during their first two years in the profession.
3. Program Standards: The state should have formal program standards that govern the design and operation of local induction programs.
4. Mentor Selection: State policy should require foundational training and ongoing professional development for mentors.
5. Mentor Assignment and Caseload: State policy should address how mentors are assigned to beginning teachers, allow for manageable mentor caseloads, and encourage programs to provide release time for mentors.
6. Program Delivery: State policy should identify key induction program elements, including a minimum amount of mentor-new teacher contact time, formative assessment of teaching practice, and classroom observation.
7. Funding: The state should provide dedicated funding to support local educator induction programs.
8. Educator Accountability: The state should require participation in and/or completion of an induction program to advance from an initial to professional teaching license.

9. Program Accountability: The state should assess or monitor program quality through accreditation, program evaluation, surveys, site visits, self-reports, and other relevant tools and strategies. (Goldrick et al., 2012, pp. 8-9)

For each of the 50 states, NTC summarizes existing policies and mentoring support for beginning educators, of which captures the state of induction across the country (Goldrick, et al, 2012). “Today, more than half the states require new teachers to participate in some form of induction or mentoring and, as a result, more new teachers receive mentoring or induction support than ever before” (Goldrick et al., 2012, p. 3). According to the policy report, while half of states require new teachers to participate in supportive programs, the requirements of those programs vary widely. In addition, Goldrick et al. (2012) reports that there are states that have pieces of excellent programs, but:

1. No single U.S. state has perfected its induction policy to ensure the provision of high-impact, multi-year induction support for all beginning educators.
2. Half the states still don’t require all beginning educators to receive induction or mentoring support.
3. Only three states-Connecticut, Delaware and Iowa require schools and districts to provide multi-year induction support to beginning teachers, require teachers to complete an induction program to obtain a professional teaching license, and provide dedicated state induction funding. Only three.
4. Further, like many other states, each of these three have shortcomings in their policies governing induction for beginning school principals (not required in CT, required only one year in DE and IA), adoption of induction programs standards (only in CT),

policies governing on-going mentor professional development (only in CT), and limitations on full-time mentors (in CT and DE). (Goldrick, et al., 2012, p. 6)

Goldrick et al. (2012) report that while state officials may mandate induction in some states, many omit the required funding, programs standards, mentor/coach selection and training. Recommendations for states regarding induction support include: developing local accountability structures with an emphasis on program improvement and measurement of outcomes, dedicating state funding for program evaluation, surveying all novice teachers about the quality of their induction programming, and conducting site visits of programs where leaders and new teachers are interviewed (Goldrick et al., 2012). Further research reports on the needs of new teachers, which can assist districts in the creation of their induction programs.

Quality Characteristics as Defined by Novices

Through various studies, needs of novice teachers, and districts leaders' awareness of this information informs the learning agenda and creation of comprehensive systems of induction. When Bentley, Morway & Short (2013) interviewed new teachers, they learned that novices want:

- professional development connected with teacher evaluation,
- the opportunity to complete self-evaluations connected to the district assessment rubric,
- to participate in one or more practice observations,
- and to observe experienced colleagues teach.

- In addition, new teachers report that observations by administrators, coaches, and mentors should be tools for providing feedback and instructional coaching (Brock & Grady, 1996).

Novices also report that they continue to develop content and pedagogy, classroom management is a major concern, and orientation and induction programs need to meet their unique needs (Brock & Grady, 1996).

"Ask us what we need to know. Then plan the meetings to provide information and assistance that responds to those needs" (Brock & Grady, 1996, p. 182). The needs of novice teachers represent a major shift in how schools induct their new hires. "They embrace issues of curriculum, instruction, assessment, management, school culture, and the larger community. They go well beyond maintaining order, which most perceive as the primary concern of beginning teachers" (Feiman-Nemser, 2003, p. 2).

According to Stanulis et al. (2007), beginning teachers yearn to work together in collaborative networks to share innovative practices and find their collective voice. In addition to connecting novice teachers together, quality induction programs provide opportunities for early career teachers to collaborate with veteran teachers and administrators (Wong, 2004). Wong (2004) also found that teachers remain in the field when they belong to collaborative networks that are built on trust and appreciation for each other's contributions.

...teachers learn more: in teacher networks and study groups than with mentoring; in professional development programs that are longer; sustained, and intensive than shorter ones; when there is collective participation; and when they perceive teacher learning and development as part of the coherent professional development program. Thus successful programs: have networks that create learning communities; treat every colleague as a potential valuable contributor; turn ownership of learning over to the learners in study groups; create learning communities where everyone, new teachers as well as veteran

teachers, gains knowledge; and demonstrate that quality teaching becomes not just an individual responsibility, but a group responsibility as well. (Wong, 2004, pp. 50-51)

Recommendations for the incorporation of collaborative networks for novice teachers include the organization of professional learning communities (PLCs), where there is a shift away from individual teachers and classrooms toward new and veteran teachers working together with the outcome of student achievement by examining daily practice (HayGroup, 2014).

What keeps good teachers are structured, sustained, intensive professional development programs that allow new teachers to observe others, to be observed by others, and to be part of networks or study groups where all teachers share together, grow together, and learn to respect each other's work. (Wong, 2005, p. 46)

Successful program developers create professional learning communities, encourage all colleagues as contributors, trust the learners to share and create knowledge together, include veteran teachers, and communicate the message that quality teaching is a group responsibility (Wong, 2004). The former body of literature substantiates the need for a global understanding of induction, awareness of state induction policy, mindfulness regarding the needs of novice teachers, attentiveness to the impact of school culture on new teachers, and collaboration and networking among recent hires.

In addition to having needs met in a collaborative network of teachers, the following review of the literature demonstrates that novice teachers have social and emotional needs and often struggle to become a part of the school culture.

School Culture and Climate

As earlier researchers concluded, novice teachers become enculturated into a school system, with or without induction. District leaders have the opportunity to not only support new teachers, but also create a positive culture and set professional norms through the novice teachers

they hire. As Schechty (1997) wrote, "Structural change that is not supported by cultural change will eventually be overwhelmed by the culture, for it is in the culture that any organization finds meaning and stability" (p. 136). When support for novice teachers' social and emotional well-being is absent, induction leaders will struggle to produce the effects that are intended. The first three years of teaching are a time of great learning for novice teachers and a period of adjusting to the profession of teaching and coping with change. Surviving depends largely on the working conditions and school culture that teachers experience (Feiman-Nemser, 2003).

It does not take long for a newcomer to take stock of whether the school's values, norms and relationships are consistent with learning, respect, encouragement, support for help seeking and help giving, celebration of struggle and accomplishments, principles and well-informed debate, and open consideration of alternative views. (Birkeland & Feiman-Nemser, 2012, p. 110)

According to Feiman-Nemser (2003), even the highest quality induction programs cannot offset a negative school climate, competition between teachers, or a teacher assignment that does not allow for acclimation and a chance to learn. "However, novices will feel supported by schools when they 'make assignments that fit new teachers' backgrounds and interests, provide easy access to resources and practical expertise, and offer regular opportunities for substantive talk about teaching and learning" (Feiman-Nemser, 2003, p.4).

Researchers wrote about the need to invest in induction programs. As districts work to develop programs, Birkeland and Feiman-Nemser (2012) caution that program investments lose value when there are unsupportive professional cultures. "Therefore, researchers argue that induction supports are ideally situated in schools with integrated professional cultures, in which new and experienced teachers regularly collaborate around instructional issues" (Birkeland & Feiman-Nemser, 2012, p. 111, as cited in Johnson, 2004).

In addition to strong school cultures, it is critical that districts organize the components of support for new teachers into a systematized comprehensive induction program.

Comprehensive Program Elements

With the goal of retaining quality teachers and improving their effectiveness, researchers are now outlining the components of comprehensive induction programs that exert effect on novice teachers and the students with whom they work (Fletcher et al., 2008). While many models for comprehensive induction exist, the New Teacher Center (NTC) in Santa Cruz, CA. a national non-profit, leads the field in current research and work across the country (American Association of State Colleges and Universities, 2006). According to the New Teacher Center (2012), if induction programs are to be successful, the following Induction Program Standards must be in place:

- Program Vision, Goals, and Institutional Commitment
- Program Administration and Communication
- Principal Engagement
- Program Assessment, Evaluation, and Accountability
- Mentor Roles, Responsibilities, Selection, Assignment, and Assessment
- Mentor Professional Development and Learning Communities
- Assessing Beginning Teacher Practice
- Beginning Teacher Professional Development and Learning Communities
- Focus on Instructional Practice
- Focus in Equity and Universal Access

Once these more robust standards are in place, Moir (2005) recommends incorporating the following checklist:

- full-time program administrators;
- quality mentoring that includes selection and development;
- formative assessment for beginning teachers;
- training in data collection and analysis;
- training for site administrators;
- teaching standards;
- high expectations for new teachers, mentors, and students;
- training for work with diverse students and English Language Learners;
- and networking and training opportunities for beginning teachers.

These essential elements and core components should be a part of comprehensive induction programs, where there are many activities and people involved, coherent with logical connections, and sustained for a period of years (Wong, 2005). Of the core components listed previously, Brock and Grady (1996) reported that beginning teachers state that mentors are a vital measure of the support that they receive.

Mentors, or instructional coaches, are critical components of induction for novice teachers and “no technology, no curriculum, no standardized structures can substitute for the power of a knowledgeable and skillful veteran to move a novice teacher to ambitious levels of teaching (Moir & Gless, 2001, p. 112). Programs that include mentors for new teachers can vary from a single meeting between mentors and mentees, to ongoing buddy mentoring, to a highly structured programs that involve instructional coaching around best practices in teaching and

release time from teaching roles (Ingersoll & Strong, 2011). Induction programs that have quality mentoring as an essential component require rigorous selection criteria, professional development, and a network of support for mentors (Moir & Gless, 2001).

Not every outstanding classroom teacher is necessarily a talented mentor. Selection criteria include strong interpersonal skills, credibility with peers and administrators, a demonstrated curiosity and eagerness to learn, respect for multiple perspectives, and outstanding instructional practice. The pedagogy of mentoring includes an in-depth understanding of teacher development, professional teaching standards, performance assessment, and student content standards, along with strategies for classroom observation and a variety of coaching techniques. (Moir & Gless, 2001, p. 112)

Mentors support novice teachers by sharing advice, prompting reflection, demonstrating quality teaching practices, observing and providing feedback, decreasing isolation, helping to set goals, modeling professionalism, exchanging ideas, and keeping the passion for teaching alive (Moir, 2005). “Evidence suggests that when mentors have substantial preparation and when the mentoring is instructional and standards based, beginning teachers can also have a significant effect on student achievement (Stanulis & Floden, 2009, p. 114, as cited in Fletcher et al., 2008). With mentoring at the core of comprehensive programs and additional essential elements established, further research recommends multi-year programming or sustaining induction over a period of years.

Program Length

Most induction program leaders only view support as applicable to first year teachers and often those systems are limited to an untrained mentor, which is a narrow vision of what they should be accomplishing (Feiman-Nemser, 2001). “By most accounts, new teachers need three or four years to achieve competence and several more to reach proficiency” (Feiman-Nemser, 2003, pp. 2-3). According to Wong (2004), in order for novice teachers to be effective, there

needs to be an induction program that accelerates their teaching skills at every point in their educational careers.

... few schools acknowledge that learning the art and craft of teaching happens over time. Learning to teach is a developmental process that takes several years. What is important in the life of a new teacher is the presence of a district articulated, coherent, lifelong professional development program. (Wong, 2004, p. 48)

Research supports multi-year induction programming for novice teachers. A study funded by the US Department of Education and conducted by a research team from the Mathematica Policy Research Centre found that, "...only after two years of induction that there was a significant positive difference observable in student achievement between the students of the comprehensive induction teachers and the control group teachers" (Haygroup, 2014, p. 15).

Ingersoll and Strong (2011) reported similar results when comparing the achievement of students in treatment and control groups in teachers' third year of teaching. In examining students' pre and posttest scores, the study found significant differences in students' achievement in the two groups.

These impacts were equivalent to moving the average student from the 50th percentile to the 54th percentile in reading and to the 58th percentile in math. In other words, the study found that after 2 years of receiving induction, teachers' effectiveness significantly improved (Ingersoll & Strong, 2011, pp. 221-222).

According to the aforementioned research, learning to teach requires clear, connected, and sustained professional development over a period of years, which positively effects student achievement. "That is why comprehensive induction is the foundation of a coherent and sustained professional development process from which we can go beyond" (Wong, 2005, p. 54).

Despite the existing research, much of which is outlined in this review, on the need for comprehensive systems of support for novice teachers over a period of multiple years, individual

state induction policies and funding for such programming is inconsistent throughout the country. The NTC's program of essential elements for support, which includes mentors or instructional coaches as critical to novices' success, provides a researched framework for districts' work in organizing induction programming.

According to Moir and Gless (2001), when school planners build quality induction programs that include components listed in the research reviewed in this section, novice teachers develop the skills needed to become leaders from the first day of teaching and well into their experienced years (Moir & Gless, 2001). Likewise, veteran teachers who mentor and coach novices have opportunities to learn, grow, and become stronger leaders.

Defining Teacher Leadership

The research indicates that teachers require support through comprehensive induction programs during the first three years of teaching in order to become effective and produce effects on student learning. In addition, review of the research also concludes that comprehensive induction programs include: systematic enculturation; attention paid to new teachers' social and emotional needs; collaborative networks; essential components that include instructional coaching and multi-year programming; and building of teacher leader skills. According to Stanulis et al. (2007), teacher leadership should be an essential focus in supporting new teachers: "As we see induction, the primary goal is to prepare strong teachers who participate in a community of educators and over time become leaders in their schools, districts, and the broader educational community" (p. 137). Lemlech and Hertzog (1998) added that experienced teacher leaders are retiring and many states are filling positions with unlicensed teachers. "Those teachers who are well prepared must assume leadership positions at a younger age and with less

experience than their mentor colleagues” (Lemlech & Hertzog, 1998, p.11). Education has evolved to support an inclusive view that all teachers have the potential to be leaders, including novice teachers (Carver & Meier, 2013). As a result of this shift, teacher leadership is a professional goal that all teachers can attain as they continue to build their instructional practice (Carver & Meier, 2013).

If a primary goal of induction is to prepare novice teachers to become leaders over time, it is imperative that district induction leaders and principals have a collective understanding of the rationale behind this concept and a working definition. Teacher leadership is more than teachers gaining power, becoming principals, and completing advanced degrees. “Rather, it is about mobilizing the still largely untapped attributes of teachers to strengthen student performance at ground level and working toward real collaboration, a locally tailored kind of shared leadership, in the daily life of the school” (School Leadership for the 21st Century Initiative, 2001, p. 4). In classrooms where teachers move students into knowledge builders and collaborators, much of what educators do as decision makers pulls them naturally into leadership roles (O’Hair & Odell, 1995). According to Bond (2011), teachers are natural leaders with their students because they are responsible for what takes place in their classrooms. Beyond their direct teaching, novice teachers work with principals to build influence beyond the classroom to contribute to their educational community with a goal of improving educational practice.

Barriers to Teacher Leadership

Top-down Beliefs and Structure. Barriers exist to positioning novice teachers on a pathway to leadership. The first barrier to teacher leadership in schools involves the structure of

the system and beliefs of administrators. According to the School Leadership for the 21st Century Initiative (2001), school systems have not been designed to consider teachers as leaders. The report writers summarize that the primary paths to leadership for interested teachers have been to become administrators, work with teacher organizations, or become involved with unions. In fact, in the School Leadership for the 21st Century Initiative (2001), Harrier Tyson wrote, “most school superintendents and principals are still wedded to patriarchal notions of leadership, but some are beginning to learn that teachers are experts on certain matters and should be partners rather than subordinates in the running of schools” (p. 9). Berry (2014) adds that there is power and potential of teachers leading without leaving the classroom.

American policymakers are right to concern themselves with the quality of instruction in our K-12 schools. But the “how” of improving that instruction must go beyond top-down evaluation systems and “anoint-and-appoint” teacher leadership. Instead, our students deserve models that strategically draw on teachers as experts capable of assessing and strengthening one another’s practice. The top-down approach of relying on overstretched administrators (and piling leadership responsibilities on top of teachers’ instructional duties) just isn’t helping us improve tomorrow’s schools. (Berry, 2014, p. 1)

Even when administrators view teachers as potential leaders, the system usually lacks a systematic and consistent effort to promote teachers as leaders (Berry & Weider, 2013). “All too often, principals are wary of teacher leaders, primarily because of uncertainty about how to identify and utilize them” (Berry, 2014, p. 2). In order to open pathways to leadership for all teachers, school systems must re-design the organizational structure to create collaborative learning where leadership is widely available and unrelated to the educators’ position title (Harris & Lambert, 2003). In addition to the structure of school systems and administrator beliefs, another obstacle to teacher leadership is the insufficient number of educators who are presented with this leadership opportunity (O’Hair & Odell, 1995).

Choosing Teacher Leaders. There are challenges for school systems that expand leadership roles beyond administration and the limited number of privileged educators (O’Hair & Odell, 1995). Berry (2014) reported that after surveying 50 administrators from more than 30 school districts that secured federal grants to develop teacher leadership through innovative practice, most of those interviewed could not imagine teachers leading in positions other than traditional instructional coaches or peer reviewers. In addition, these administrators only envisioned teacher leaders in full-time roles, not in hybrid positions wherein they taught while assuming leadership responsibilities. However, Lambert (2003) insisted “...that all teachers have the right, capability and responsibility to be leaders, therefore, the major challenge before us is not to identify who is and who is not a teacher leader but to create a context that evokes leadership from all teachers” (p. 422). Teachers do not see themselves as leaders when the role is defined for an individual with specific characteristics and formal authority (Lambert, 2003). Teachers begin to see themselves as leaders when leadership is a concept evident in the culture of schools (Lambert, 2003).

According to Lambert (2003), leadership is being redefined and there are new assumptions to consider, including:

- Leadership may be understood as reciprocal, purposeful learning in community.
- Everyone has the right, responsibility and capability to be a leader.
- The adult learning environment in the school and district is the most critical factor in evoking leadership identities and actions.
- Within that environment, opportunities for skillful participation top the list of priorities.

- How we define leadership frames how people will participate.
- Educators are purposeful—leading realizes purpose (Lambert, 2003, p. 425).

Bond (2011) explained that no teachers should be exempt from serving as leaders, as all teachers have the capacity for this endeavor and most want to participate. “All teachers must be educational leaders in order to optimize the teaching and learning experience for themselves and their students; and, as professionals, they are expected to do whatever it takes to make that happen” (Bond, 2011, p. 282). While the former research establishes the need for all teachers to lead, it also indicates that there are barriers in encouraging novice teachers to aspire to leadership responsibilities.

Invoking Teacher Leadership. Teachers frequently do not view themselves as leaders or assume leadership positions because of frustration, stress, lack of confidence and time, and unsupportive work environments, according to the following literature reviewed. O’Hair and Odell (1995) reported that “...teachers routinely report two things: feelings of general satisfaction with expanded leadership roles, and feelings of specific frustration, stress, and strain due to the time demands of these roles and the time taken away from their first order of business-classroom teaching” (p. 238). If teacher leadership is placed on top of everything else that is expected of educators, they can feel unsupported in taking on these roles.

According to Carver and Meier (2013), there is an emerging tension in the area of teacher leadership. On one hand, survey respondents indicated that all teachers should strive to be leaders because leadership should not be role-bound. However, Carver and Meier (2013) report that lack of time and training limits teachers from building leadership capacity. Berry (2014) supported this notion in writing:

Unfortunately, even in 2014, school schedules allow little time for teachers to design and lead lesson studies, conduct action research, launch virtual learning communities, advance school-community partnerships, and develop and score new student assessments. Little space is available for teachers to lead inside their schools and districts—or to spread their expertise across their states and nation (and the globe). (p. 3)

Colleague and Network Support. In addition, teachers who were unsupported were more hesitant to convey interest in more formal leadership positions (Carver & Meier, 2013). According to Carver and Meier (2013), colleagues were either clearly supportive or unsupportive of teachers' leadership work. "Supportive colleagues acted like cheerleaders, setting high expectations and demanding strong performance, but also understanding when things didn't go well" (Carver & Meier, 2013, p. 183). Further, Carver and Meier (2013) wrote, these colleagues were often involved in co-planning and teaching and encouraged new teachers to be creative, resulting in more confidence in the ability to serve as teacher leaders. In contrast, "...teachers in the unsupportive category were more likely to retreat to their classrooms than to actively engage in leadership activities" (Carver & Meier, 2013, p. 183).

Novice teachers may also experience colleagues not listening to them and the feeling of ineffectiveness in influencing change (Carver & Meier, 2013). In order to gain support from veteran teachers, novices described the need to position themselves as competent in front of everyone with whom they interacted, from students to colleagues to administrators (Carver & Meier, 2013). Carver and Meier concluded that novice teachers are in a difficult position; on one hand many are reform-minded and know what they want to accomplish, however they also have little classroom experience from which to draw. New teachers want to collaborate with colleagues, but they lack confidence and may be rejected when they do attempt to exert leadership (Carver & Meier, 2013). "Thus, it is no wonder that early career teachers' developing

conception of teacher leadership is not yet firmly established in practice” (Carver & Meier, 2013, p. 185). In order to develop teacher leadership as an early practice of novice teachers, such novices need to experience exposure in pre-service training to build on their qualifications.

Pre-service training. Development of teacher leadership should be an essential element in supporting new teachers, however because of the immediate demands placed on new teachers, developing their qualifications should be an element of the pre-service experience (Bond, 2011). Not only is the beginning teacher responsible for the same level of curriculum knowledge, planning, teaching, student engagement, assessment, and communication as veteran teachers, they are expected to lead on the first day of their teaching career (Bond, 2011). If teachers are to be successful in today’s schools, teacher leadership skills should begin to be developed within pre-service training (Lemlech & Hertzog, 1998).

To prepare beginning teachers for (teacher leadership), teacher preparation programs must introduce the concept of teacher leadership in their courses and provide these novices with a mental framework for approaching teacher-related tasks and opportunities to develop as teacher leaders. (Bond, 2011, p. 294).

Recommendations for building teacher leadership skills into pre-service programs include the following components: 1) Weaving the teacher leadership skills into all teacher preparation courses so that it is a theme throughout pre-service, 2) Requiring pre-service educators to reflect on teacher leadership attitudes, personal visions, and beliefs throughout their experiences, 3) Giving opportunities for pre-service teachers to volunteer so that they are serving and learning the values connected with leadership and, 4) Encouraging participation in professional organizations to develop leadership skills and learn to lead at the local level (Bond, 2011). Teacher leadership is introduced early in preparation with the intention that pre-service

teachers are given opportunities to develop their skills over time and will be better prepared for leading in their in-service career (Bond, 2011).

As aforementioned in this review of literature, novice teachers do not always see themselves as leaders and may be overwhelmed during their initial years of teaching. According to Bond (2011), skills for pre-service teachers to acquire include the following: understanding others (such as colleagues, parents, administrators); knowing schools and organizational contexts; delivering high quality instruction; and striving to be a career long learner. “If preservice teachers are to view themselves as teacher leaders, then their college professors must introduce the idea, guide them to consider the possibility of leadership, and give them opportunities to develop leadership skills” (Bond, 2011, p. 293). When pre-service teachers begin to explore teacher leadership, they are more prepared to assume greater leadership roles as they move through their teaching career (Bond, 2011). There are key elements to developing leadership capacity, both in pre-service learning and within comprehensive induction programs.

Cultivating Leadership. Cultivating leadership capacity involves several goals, including: providing collaborative learning, developing all adults in the school community, achievement of continual and ongoing improvement in student performance, participating in the professional community, and building of leadership dispositions. In addition to developing all adults to be leaders and striving for ongoing achievement, Harris and Lambert (2003) wrote that a significant element in the development of leadership includes collaboration or “the notion of learning together, and the construction of meaning and knowledge collectively and collaboratively. Such leadership permits opportunities to surface and it mediates perceptions, values, beliefs, information and assumptions through continuous conversations” (p. 6).

Leadership involves collaborative learning and that leads to resolute change (Harris & Lambert, 2003). Lemlech and Hertzog (1998) made the case that novice teachers who worked collaboratively with a peer were influenced by this behavior and applied this skill to their in-service teaching.

Along with building leadership through increased collaborative skills, pre-service and induction programs can provide opportunities for new teachers to learn from each other through peer coaching. New leaders need to be willing show initiative in inviting their peers into the teaching setting to observe and provide feedback (Lemlech & Hertzog, 1998). “Through the assistance of a peer, teachers can focus and analyze their teaching practices” (Lemlech & Hertzog, 1998, p. 12). Becoming more effective teachers through peer coaching, is a step towards increased teacher leadership. Likewise, skillful participation in a professional community increases leadership because “...such work embraces a shared vision, inquiry, dialogue, reflection and a focus on learning” (Lambert, 2003, p. 426). Teachers who learn from each other are more likely to be leaders, recognizing that a learning community is at the center of a high leadership capacity school (Lambert, 2003).

Finally, teacher leadership skills develop when pre-service and novice teachers seek to develop particular dispositions. When teacher leaders are encouraging and supportive of their colleagues, accept challenges, engage in decision-making, and believe they can make a difference in the school environment, they are more effective leaders (Lemlech & Hertzog, 1998). Along with the development of leadership, there are various characteristics, or dispositions, that teacher leaders possess.

Teacher leaders demonstrate specific skills that allow them to excel in leadership positions. Carver and Meier (2013) emphasized that knowledge of teacher leader qualities offers perspective on the preparation of novice teachers to assume these roles. First, communication skills must be effective, as leaders regularly interact with others, share ideas, ask questions, discuss information and actively listen (Bond, 2011). When teacher leaders focus on their communication skills, they are prepared to build trust in colleagues, understand school culture, and work collaboratively with others (Lemlech & Hertzog, 1998). In addition, teacher leaders are often described as “movers and shakers”, possessing a reform or improvement-oriented perspective (Carver & Meier, 2013).

Not only do many teacher leaders assume coaching and student advisor positions, they also serve on curriculum teams, share new instructional strategies with colleagues, and participate on data teams (Carver & Meier, 2013). In addition to being reform minded, teacher leaders seek solutions to challenges, build confidence in others, and are reliable, truthful, open-minded, flexible, optimistic, resilient, and intrinsically motivated (Bond, 2011). Most importantly, Bond (2011) wrote that teachers engage in teacher leadership because they want to improve instruction and student achievement.

They care deeply about students and about the institutions designed to help students learn, and they continually think about the gap between the real and the ideal in schools. The discrepancies they witness compel them to challenge the status quo. Teacher leaders want to make a significant difference in children’s lives. (Bond, 2011, p. 284)

Teacher leaders tend to either be “advocates who frame school related issues so that student learning remains the focus, innovators who take information and creatively implement it, or stewards who raise the status of teaching and serve as models of continued improvement” (Bond, 2011, p. 287). Berry et al. (2013) call these new leaders “teacherpreneurs” because they work

outside of the lines and mobilize their colleagues, ultimately transforming the profession.

Teacherpreneurs, or new teacher leaders, engage in various types of activities that build leadership skills throughout their careers.

Knowledge and building of teacher leadership characteristics and development of skills leads novice teachers to practice leading both inside and outside of the classroom. Because novices begin as instructional leaders with their students, a natural first step is developing their teaching expertise and confidence (Bond, 2011). A common activity that novice teachers engage in to develop classroom expertise is conducting action research (Bond, 2011). In an action research project,

...teachers select an aspect of their teaching to systematically investigate, such as their wait time during questioning. They record data and consider theories from the research literature, drawing conclusions about how teaching is influencing learning and vice versa, and informing future instructional decisions. (Croft, Coggshall, Dolan, Powers, and Killion, 2010, p. 6)

As expertise in teaching continues to develop, teachers become more confident and are more likely to engage and share their work with colleagues (Carver & Meier, 2013). "Teacher leadership frequently evolves from teachers' work in their own teaching. A teacher could develop an innovative approach in his or her own classroom and then discover that colleagues are interested in emulating it" (Bond, 2011, p. 290). When novice teachers are part of collaborative and collegial interactions, they engage in teacher leadership, or "...the ability to engage colleagues in experimentation and then examination of more powerful instructional practices in the service of more engaged student learning" (Lemlech & Hertzog, 1998).

Sharing innovations and expertise with peers can occur informally or in more organized settings, such as in professional learning communities (PLCs). "Finland and Singapore, through

the way teachers organize themselves into PLCs, capitalize on teachers' capacity to lead" (Berry et al., 2013, p. 638). I

When novice teachers have connected with their colleagues and leaders, networks are developed, new teachers remain in the profession, and they assume teacher leadership roles (Bond, 2011). Likewise engagement with teaching colleagues results in novice teachers reflecting and examining their teaching practices and developing their own efficacy and professionalism (Lemlech & Hertzog, 1998). Career-long learning not only influences the novice teacher's effectiveness in the classroom, but also places the educator on a pathway to leadership (Fullan, 1993). "The teacher of the future, in other words, must be equally home in the classroom and in working with others to bring about continuous improvements" (Fullan, 1993, pp. 9-10).

Lastly, teacher leadership for novice teachers begins and is sustained by conversations with team members, instructional coaches, administrators, and parents (Lambert, 2003). These conversations come in the following structure:

...coaching questions asked or ideas shared in one-on-one conversations, data dialogues in inquiring conversations, exploring action research, engaging with parents and community members in partnering conversations, and long-range planning in sustaining conversations all evoke values, experiences and increasingly skillful actions. (Lambert, 2003, p. 426)

Lambert further noted that these conversations are a type of mentoring into leadership, where colleagues' belief in novice teachers' capacities leads to these educators perceiving themselves as both effective teachers and leaders. When novice teachers engage in teacher leadership activities, students, colleagues, administrators, parents and districts experience a myriad of benefits.

School Improvement and Re-culturation. Of the many benefits that teacher leadership brings, one with career-long outcomes for teachers and the entire system is that of school improvement. Lambert (2003) wrote that teacher leaders are energized by working with their colleagues and find inspiration in the daily challenges of teaching and school improvement. “A teacher leader may be seen as a person in whom the dream of making a difference has been kept alive, or has been reawakened by engaging colleagues and a professional culture” (Lambert, 2003, p. 422).

In addition to school improvement, teacher leadership is increasingly regarded as strategic to re-culturing school for increased student achievement (Carver & Meier, 2013). “As teachers learn to talk about teaching in specific and disciplined ways and to ask hard questions of themselves and others, they create new understandings and build a new professional culture” (Feiman-Nemser, 2001, p. 1043). Novice teachers who engage in professional discourse deepen knowledge of curriculum, sharpen questioning skills and become critical thinkers (Feiman-Nemser, 2001). “Over time, they develop a stronger sense of themselves as practical intellectuals, contributing members of the profession, and participants in the improvement of teaching and learning” (Feiman-Nemser, 2001, p.1043).

When teacher leadership is part of a school culture, schools become more democratic so that the entire system benefits (School Leadership for the 21st Century Initiative, 2001). “The more democratic a school culture, the more students come to believe in, practice, and sustain our democratic form of governance” (School Leadership for the 21st Century Initiative, 2001, p. 4). With the aforementioned benefits of teacher leadership, research reviewed details various recommendations for district leaders to consider.

Reviewed Research Recommendations for Implementing Teacher Leadership

Teacher Leadership Pathways. There are several global recommendations that school systems can take into consideration when building teacher leadership in novice teachers. The Center for Teaching Quality (CTQ) (2014), advocates call for the establishment of teacher leadership pathways that embolden teachers to lead without leaving the classroom. “Ali Wright’s new teacherpreneur schedule in Lexington (KY), much like what a university professor may have, has given her the unique time and space in the United States to incubate and execute her own ideas about professional learning communities, demonstrating how virtual learning networks can spread teacher expertise” (CTQ, 2014, p. 3).

In a continuum for teacher leadership, “novices first lead in small, structured, and supported ways and progress incrementally to take on larger, more complex roles over time” (Bond, 2011, p. 282). District leaders need to be incremental in developing and supporting leadership pathways, with attention focused on preparing principals to create school conditions promoting leadership for all interested teachers, including novices (Berry, 2014). Universities play a role in this preparation, “for at least some portion of their training, principals and teachers should be prepared together to collaborate as leaders” (Berry, 2014, p. 3).

Restructure PLCs. Another recommendation by Berry (2014) was to redefine professional learning communities (PLCs) from obsession over data and student test scores to the “why” and “how” of effective teaching. “It is time to ensure that teachers know how to conduct action research aimed at solving problems, and that principals understand how to support such inquiry to drive school improvement and accountability to the public” (Berry, 2014, p. 3).

Revise Teacher Evaluation. In addition, districts need to revise approaches to teacher evaluation systems given narrow foci on classroom observations and student evaluations (Berry, 2014). “What if teacher-evaluation systems placed a premium on teachers' ability to spread effective practices among colleagues within and beyond their schools” (Berry, 2014, p. 3)? Administrators should provide more opportunities for teachers to engage in peer observation, followed by reciprocal mentoring where educators exchange high-quality feedback in instruction and student learning-all building teacher leadership skills and advancing the practice of teaching (Berry, 2014).

Visioning. Teachers need to pursue personal visioning to make sense of who they are, why they entered the field of teaching, and to take a stand for what they believe in (Fullan, 1993). Fullan writes that personal vision is the pathway to organizational change, which is linked to teacher leadership. As a result of awareness of personal vision, novice teachers begin to inquire and question how their classrooms and the organization operates (Fullan, 1993). “The essential activity for keeping our paradigm current is persistent questioning” (Fullan, 1993, p. 4). Teacher leaders are agents for reform and thus life-long learners (Fullan, 1993).

Summary

In research reviewed, teacher leadership was defined as “mobilizing the still largely untapped attributes of teachers to strengthen student performance at ground level and working toward real collaboration, a locally tailored kind of shared leadership, in the daily life of the school” (School Leadership for the 21st Century Initiative, 2001, p. 4). In addition, the research discussed knowledge to eradicate barriers when creating a teacher leadership pathway. These obstacles include current system structures and beliefs of administrators regarding the idea of

novice teachers as leaders. Additional barriers take account of beliefs that only a few privileged educators should attain leadership, while novice teachers fail to view themselves as leaders or assume positions of leadership. In addition to identifying barriers, a review of research found that there are ways to cultivate leadership in novice teachers, skill sets that can be nurtured, and leadership practices that novice teachers can attain. Lastly, a teacher leadership pathway for novice teachers has many benefits for school systems, with school improvement at the forefront. In addition, several global recommendations are documented for consideration when building induction programs that include teacher leadership.

Given information gleaned from this literature review, it is clear that most induction programs neglect to include a leadership pathway for novice teachers, often times preparing teachers for survival when schools are complex and in need of constant reform (Moir & Gless, 2001).

Instead, these programs must also have as part of their vision a new image of the successful teacher whose leadership capacity is developed from the moment the teacher enters a classroom. Induction programs have the potential to become one of the most powerful forces for educational change and professional renewal in the history of public education. The opportunity is there, and the most effective programs will be those that clearly recognize this potential. (Moir & Gless, 2001, p. 111)

Lambert (2003) implored school leaders to consider their own assumptions, and their language and beliefs about teacher leadership. Leadership needs to move beyond administrators and include all teachers—even beginning teachers—to have an impact on school improvement (Bond, 2011). “It’s time for district leaders, preparation programs, and policymakers to take action that builds the leadership capacity of teachers and administrators—and does so in the best interests of students and tomorrow’s schools” (Berry, 2014, p. 4).

Chapter III: METHODOLOGY

Introduction

The purpose of the study was to examine novice teachers' awareness, beliefs, and perceptions regarding inclusion of, and participation in, teacher leadership pathways. The goal of the research was to investigate: (1) how teacher leadership is developed, (2) attributes novices perceive that they possess, (3) teacher leadership roles and opportunities in which new teachers are engaged, (4) and subsequent benefits of leadership for new teachers and the school districts in which they work. Findings from the study are aimed to contribute to research that supports cultivating teacher leadership early and comprehensively.

As summarized in the literature review, induction programmers must develop the capacity for novice teachers to become leaders from the first day of teaching and well into their experienced years (Moir & Gless, 2001). Leadership needs to extend beyond administrators and include all teachers—even beginning teachers—to have an impact on school improvement (Bond, 2011).

The study is an important contribution to existing research on teacher induction and new teacher support. While the research reviewed indicated that teacher leadership should be an essential focus in supporting novice teachers, many barriers were identified. Additionally, research revealed a general lack of knowledge among educators of teacher leadership, specifically of the benefits, resulting in the exclusion of a pathway to leadership in induction programming by many districts.

Research Questions and Guiding Framework

The study was guided by four essential research questions, each of which align directly with the three major themes found in the “Framework for Teacher Leadership Elements” (Figure 1.1). These three themes are:

- Seven Components for Cultivating Teacher Leadership in Novice Teachers: (1) all teachers as leaders; (2) administrative support; (3) teacher leadership knowledge, skills and dispositions; (4) time to succeed as leaders; (5) supportive culture; (6) collaboration with colleagues; and (7) professional development.
- Four Components for Identifying and Creating Roles and Opportunities for Novice Teachers to Lead: (1) peer observation with reciprocal mentoring; (2) career-long learning; (3) teaching expertise and confidence; and (4) engagement with colleagues to dialogue, hone reflection of practice, share work, and develop efficacy and professionalism.
- Four Components for Communicating Benefits of Leadership for Novice Teachers to All Stakeholders: (1) novice teacher advancement; (2) democratic school culture; (3) school improvement; and (4) re-culturing schools.

Both the framework and research questions are supported by findings from the review of the literature on a teacher leadership pathway for novice teachers. The following four research questions were created in alignment with the above teacher leadership elements, and guided the study:

1. What strategies or techniques do novice teachers report are utilized in developing their teacher leadership?

2. What select leadership attributes do novice teachers report they possess after two years of involvement in an induction program?
3. What teacher leadership roles do novice teachers report are present in the first two years of teaching and what is their level of engagement in these leadership opportunities?
4. To what degree do novice teachers report that their engagement in leadership opportunities benefits them and their school districts?

Research Design and Instrumentation

The study employed quantitative research by surveying third year teachers' perceptions of teacher leadership factors that had an effect on a successful teacher leadership pathway for novice teachers. According to Slavin (2007), "in quantitative research, researchers collect numeric data, or information, from individuals or groups and usually subject these data to statistical analyses to determine whether there are relationships among them" (p. 7).

The framework components and the research questions were aligned using a matrix (Appendix A). The matrix served as the foundation for building the study instrument. The purpose of the matrix was to align the statements in the research questions with the research on teacher leadership for novice teachers (Roberts, 2010). Research questions were listed and elements from the conceptual framework were aligned under each question. Based on the matrix, a quantitative research study was determined to be the most effective design for gathering comprehensive feedback from novice teachers in numerous Minnesota school districts. The matrix (elements of framework and questions) served as the basis of a quantitative, online questionnaire, distributed in an email message.

Researchers recommend multi-year programming or sustaining induction over a period of years (Wong, 2004 & 2005; Feiman-Nemser, 2001). Within a multi-year induction program, new teacher program administrators must also develop the capacity for novice teachers to become leaders from the first day of teaching and well into their experienced years (Moir & Gless, 2001). Based on a review of the literature, data was collected from novice teachers in their third year of teaching, who completed two years of induction programming, utilizing an online questionnaire. “The purpose of a survey is to describe the opinions, behaviors, or characteristics of a population of interest” (Slavin, 2007, p. 105). An online, emailed questionnaire (Appendix B) to gather data from third year novice teachers in numerous Minnesota school districts was created.

In addition to addressing the matrix, the survey instrument was designed to gather basic demographic data including gender, school district, total years of completed teaching, confirmation of participation in two years of induction programming, grade levels taught, current teaching assignment, and level of education.

The statements developed for the questionnaire were field tested for clarity and alignment to the research questions and the study’s conceptual framework. The field-testing was conducted with a St. Cloud State University doctoral cohort and four, third year teachers who were not study participants. There was a meeting with the doctoral cohort where the background of the study was presented, and paper copies of the draft questionnaire were distributed to each student. Corresponding to each statement were boxes to mark if the statement was clear or not. If statements were not clear, students were asked to provide feedback. There were additional boxes to indicate if the questionnaire statements correlated to the research questions. Again, if

statements were not clear, students were asked to provide feedback. Students worked in small groups to analyze clarity and alignment of statements and provide suggestions for refinements.

After written feedback from the field-testing was complete, oral feedback was gathered and questions from participants were addressed. Refinements were made to the instrument and the process was repeated with four practicing teachers in their third year of teaching who were not involved in the study. A second set of revisions was made to the instrument resulting in the final version.

Participants and Selection Process

The following process was utilized to select participants for the study and distribute the questionnaire:

1. In November 2015, the process of selecting Minnesota school districts with two-year induction programs began. Initially, staff development reports were accessed on the Minnesota Department of Education website to identify the status of district teacher induction programming. Districts were required to report if they provide induction programs for new teachers and, if so, the number of years such programming was available. Thirty-two school districts were identified that provided at least two years of new teacher induction programming.
2. Subsequently, there was a search for identified districts' websites for email addresses of a) induction leaders and if that was not available, then b) curriculum directors and if that was not available, then c) superintendent emails were used for correspondence.
3. A chart was created that included those school districts with two-year induction programs, the contact person(s) for each district, and the contacts' email addresses.

4. An email message “District Request to Conduct Research” (Appendix C) was sent to each contact person, providing the background of the research project, information regarding induction programming and the connection to effective teachers, and a request to conduct research in the district.
5. Following the initial message received, contact to the potential participating school districts was made as described:
 - a) The initial contact granted permission to conduct the study and identified the appropriate district contact person who would send the questionnaire link to teachers.
 - b) The initial contact supported the research, but directed the message to a higher level district leader for permission. That district leader either granted permission to conduct the study or gave directions to complete district paperwork to apply for permission to conduct the study.
 - c) Applications were completed within four districts for permission to conduct research and were accepted by two of the four.
 - d) For numerous districts, multiple messages were sent to seek support from other district leaders and/or St. Cloud State University faculty members to secure permission to conduct the study.
6. Out of thirty-two Minnesota school districts contacted, permission to conduct the study was granted by eighteen. Of the 14 Minnesota school districts that denied permission to conduct the study, five school district leaders indicated that they did not have two years of induction programming even though the state staff development

reports documented otherwise. One school district representative reported that all third year teachers came to the district with experience. Six school districts rejected conducting research in their districts. Two school districts' induction leaders failed to return multiple messages.

7. In December of 2015, district contact(s) were identified and an email message with questionnaire link (Appendix D) was sent to those district contacts. Those district contacts forwarded the email message, with questionnaire link, to third year teachers with a message of support. The email message introduced the researcher, provided an overview of the doctoral program and study, explained the purpose in contacting third year teachers, informed teachers that the questionnaire would take 10 minutes to complete, listed the link to the questionnaire, and notified teachers that there was a two week deadline for completion.
8. A reminder message was sent by the researcher to district contacts, to forward to third year teachers, one week after each initial message.
9. The questionnaire officially closed on March 2, 2016.
10. One hundred eighty-nine third year teachers completed the questionnaire; however one hundred four were exited from the process because they had completed more than two years of teaching. Another ten teachers were excluded from the questionnaire results because they reported that they had not participated in two years of induction programing. Of the remaining seventy-two teachers, sixty-one continued to participate in the questionnaire, while fifty completed the entire questionnaire.

Human Subject Approval-Institutional Review Board (IRB)

In the summer of 2015, the doctoral committee approved the preliminary proposal, and the St. Cloud State University Institutional Review Board (IRB) application was completed. The research title, summary, plan for data collection, location of research, principal investigator, type of research, demographic information, external funding, and agreement to certification statement were documented. IRB approval was received (Appendix E) and the process of communicating with school districts regarding their participation in the study began.

Data Analysis

After data were collected from the online questionnaire (Appendix B), they were downloaded into the Statistical Package for Social Sciences (Nie, Bent, & Hull, 1970) for analysis. The first section of data analysis includes descriptive statistics. According to Slavin (2007), "Descriptive statistics are simply convenient ways of summarizing characteristics of data in a form everyone can understand and use" (p. 241). Third year teachers in the state of Minnesota, who teach in districts where at least two years of induction programming is offered, were surveyed. Demographic information is reported including gender, years of full-time teaching completed, number of years of induction programming experienced, and level of education. The data are reported using frequency counts and percentages.

Next inferential statistics including components such as means, rank order correlation, and statistical confidence were employed to analyze the data. A reliability coefficient was calculated and using SPSS, Cronbach's Alpha was computed to be 0.97 for the total scale. The alpha is above 0.7 indicating the sample has high internal consistency and reliability. An alpha of

.97 might indicate that the instrument proved too univariate to warrant meaningful interpretations of individual statements, though it supports use of a scale made up of the collected statements.

In a correlational study, the researcher obtains data on two or more variables, then determines whether the variables are related (Slavin, 2007). “Correlation refers to the degree to which the two variables consistently vary in the same direction (positive correlation) or in opposite directions (negative correlation)” (Slavin, 2007, p. 83). The correlation coefficient (or “ r_s ”) was calculated to investigate the correlation between how each of the three groups ranked statements within each research question. In addition, statistical confidence was calculated for each correlation.

In the analysis of the data, two questionnaire statements appeared to exemplify new teachers’ perceptions of their current and future capacity for teacher leadership: Questionnaire statement 10, sub statement 8 - “I feel that I have the potential to become a teacher leader” and questionnaire statement 10, sub statement 9 - “I feel that I am currently a teacher leader.” The decision was made to examine the responses to those two statements and use them to define three comparison groups for each statement.

Three groups were created, based on responses, to questionnaire statement 10, sub statement 8 - “I feel that I have the potential to become a teacher leader”

- Group 1 was comprised of the new teachers who either strongly disagreed or disagreed with the questionnaire statement ($N=2$)
- Group 2 teachers agreed with the questionnaire statement ($N=25$)
- Group 3 teachers strongly agreed with the questionnaire statement ($N=29$)

In addition, three groups were created, based on responses, to questionnaire statement 10, sub statement 9 - “I feel that I am currently a teacher leader”

- Group 1 was comprised of the new teachers who either strongly disagreed or disagreed with the response above ($N=13$)
- Group 2 teachers agreed with the questionnaire statement ($N=29$)
- Group 3 teachers strongly agreed with the questionnaire statement ($N=14$)

In consultation with a statistical advisor, it was determined that the respondents’ choices did not always result in a natural distribution (N s and percentages associated with response choices).

After an examination of the data, a decision was made to secure a more reasonable proportion of respondents by combining strongly disagree and disagree responses (hereafter Group 1). This convention is followed throughout the results section.

Using the three aforementioned groups established from responses to “I feel that I have the potential to become a teacher leader” (questionnaire statement 10, sub statement 8) and “I feel that I am currently a teacher leader” (questionnaire statement 10, sub statement 9), mean scores of the groups’ responses (treating them as a 4 point scale) to each questionnaire statement were computed in order to answer each research question. Then, the mean of each group’s statements was ranked for each group of respondents (see above).

Inferential statistics were calculated to compare ranks between the three groups utilizing Spearman’s Rank-Order Correlation, or Spearman’s rho (denoted r_s), which is a measure of the strength of a relationship between the ranks of the means of paired data. Spearman’s Rank-Order Correlation permits researchers to test the null hypothesis that there is no relationship between how members of each comparison group ranked their responses to the questionnaire

statements. If the null is rejected, researchers entertain the possibility that there is a positive or negative relationship between how the two groups ranked questionnaire statements. In evaluating rank order for each questionnaire statement, the correlation coefficient (or r_s) was calculated to investigate the correlation between how members of groups ranked questionnaire statements. In addition, the level of statistical confidence was calculated for each correlation. This process was repeated in analyzing all four of the research question sections that follow.

Limitations

The limitations of a research study are features or factors that impact a study and are beyond the researcher's control. They are the restrictions that affect the identification and quantification of the study's results (Roberts, 2010). The following limitations impacted the results of the study:

1. No causation is implied or can be tested directly in a pure correlational study – the direction of causation could move in either direction without an implicit and directly-tested causal argument.
2. Because the study employed a sample of convenience, the n was lower than desired. Since the sample was not randomly selected from the population, there is some uncertainty in the conclusions drawn from the inferential statistics used in the study.
3. The small sample size appeared to be due to the following factors:
 - Only one-third of Minnesota school district leaders indicated on state staff development reports that they offered two years of induction programming. Five of the districts selected for the study indicated they did not offer a second year of induction programming, though they documented otherwise on the state report.

- Many Minnesota school districts have hired experienced teachers. If a third year teacher had more experience than two complete years, they were excluded from the questionnaire results. The greatest number of participants for the study were excluded for this reason.
- Several large Minnesota school districts declined participation in the study due to the study's demands on the teachers' time or there were insufficient numbers of teachers to contribute to the study with any statistical reliability.

Summary

The study employed quantitative research by surveying third year teachers' perceptions of teacher leadership factors that had an impact on a successful teacher leadership pathway for novice teachers. This chapter outlined the research design, instrumentation, participant selection process, analysis and limitations of the study. Chapter four will provide detailed results of the study, a synthesis and summary. Chapter five will discuss findings from Chapter four, as well as provide conclusions and recommendations for future study.

Chapter IV: STUDY RESULTS

Introduction

The purpose of the study was to examine novice teachers' awareness, beliefs, and perceptions regarding inclusion of and participation in a teacher leadership pathway. Goals of the research were to (1) investigate the manner in which teacher leadership is developed, (2) identify attributes novice teachers perceive they possess, and (3) identify the benefits of teacher leadership roles and opportunities in which novice teachers reported they were engaged. As summarized in the literature review, induction programmers must develop the capacity for novice teachers to become leaders from the first day of teaching and well into their experienced years (Moir & Gless, 2001). The goal of the research was to investigate if leadership opportunities are extended beyond administration to all teachers—even beginning teachers—to have an impact on school improvement (Bond, 2011).

In this chapter are the findings for each research question along with descriptive data summaries. Data in the study were analyzed at the St. Cloud State Office of Statistical Analysis. Basic statistical computations including means, rank order correlation, and statistical confidence were employed to analyze the data. All data were downloaded into the Statistical Package for Social Sciences (Nie, et al., 1970) for analysis.

Study Methodology and Instrumentation

Quantitative research was employed by surveying third year teachers' perceptions of teacher leadership factors that impacted a successful teacher leadership pathway for novice teachers. According to Slavin (2007), "in quantitative research, researchers collect numeric data,

or information, from individuals or groups and usually subject these data to statistical analyses to determine whether there are relationships among them” (p. 7).

Description of the Sample

In the study, staff development reports were accessed using the Minnesota Department of Education website to identify the status of district teacher induction programming. District personnel must report if they provide induction programs for new teachers and, if so, the number of years such programming is available. Thirty-two school districts were identified whose induction leadership provided at least two years of new teacher induction programming. Leaders in eighteen Minnesota school districts, that provided two years of induction programming, agreed to forward the study questionnaire to their district’s third year teachers. One hundred eighty-nine teachers initially accessed the questionnaire, however one hundred twenty-seven were exited out of the process either because they did not complete two years of induction programming or they came to their district with prior teaching experience, therefore not considered a “true” third year teacher. Sixty-two third year teachers responded and their responses were accepted in their entirety.

District contacts forwarded an email message that explained the purpose of the study and provided a link to the questionnaire, “Perceptions of Novice Teachers Regarding Teacher Induction and Teacher Leadership” (Appendix B). The questionnaire consisted of four sections organized by research questions. Participants were provided with definitions of teacher leadership and induction throughout the questionnaire. Study participants responded to demographic inquiries followed by 44 statements categorized by the four research questions.

Descriptive Results

Third year teachers in the state of Minnesota, who teach in districts where at least two years of induction programming is offered, were surveyed. In tables 1-5, demographic information is reported including gender, years of full-time teaching completed, number of years of induction programming experienced, and level of education. The data are reported using frequency counts and percentages.

In Table 1, the gender of respondents is represented.

Table 1. Frequency Distribution by Gender ($n=62$)

Gender	n	Percent
Female	53	85.5
Male	9	14.5
Other designation	0	0

The gender most frequently reported by respondents was female ($n=53$, 85.5%). Remaining respondents, (14.5%, $n=9$) were male. Despite the small n , it can reasonably be inferred that the sample was not randomly distributed by gender. This approximates the ratio of male to female educators in Minnesota-29% male to 71% female (National Center for Educational Statistics, 2013).

In Table 2, the years of full-time teaching completed by respondents are reported.

Table 2. Frequency Distribution for Years of Full-Time Teaching Completed ($n=62$)

Completed Years of Teaching	n	Percent
Total of Two Years	62	100.0
More Than Two Years	0	0

Any third year teacher with more experience greater than two completed years was exited out of the questionnaire. Therefore, 100% of the teachers reported in the study completed two years of teaching.

In Table 3, number of years of induction programming is reported.

Table 3. Frequency Distribution for Years in Induction Programming ($n=62$)

Completed Years of Induction Programming	n	Percent
Total of Two Years	62	100.0
Less Than Two Years	0	0

Any third year teacher who did not complete two years of induction programming was exited from the questionnaire. Of the teachers who participated in the study, 100% ($n=62$) completed two years of induction programming.

Within the questionnaire, respondents were asked to report all grade levels taught in the previous two years. Teachers were able to report more than one grade level. This information is reported in Table 4.

Table 4. Frequency Distribution of All Grade Levels Taught in Past Two Years ($n=88$)

Grade Level Taught	<i>n</i>	Percent
Early Childhood	4	06.5
Elementary (K-3)	33	53.2
Elementary (in elementary building) 5-8	21	33.9
Middle School (5-8)	12	19.4
High School (9-12)	18	29.0

While $n=62$ in all other tables, due to multiple grade levels taught, $n=88$ for purposes of this table. In summary, some respondents chose more than one category of the grade level they taught. The most common grade levels taught by respondents in the past two years were grades K-3 ($n=33$, 52.2%) followed by grades 5-8 ($n=21$, 33.9%).

Table 5 represents respondents' level of education. Response options included bachelor's degree or master's degree.

Table 5. Frequency Distribution Level of Education ($n=62$)

Level of Education	<i>n</i>	Percent
Bachelor's Degree	51	82.3
Master's Degree	10	16.1
No Response	1	01.6

The highest percentage of respondents, 82.3% ($n=51$) reported their level of education was a bachelor's degree, while 16.1% ($n=10$) reported they had earned a master's degree.

Inferential Results and Analysis

Data analysis was conducted per results from each of the four research question. This section is organized and guided by the following four research questions:

1. What strategies or techniques do novice teachers report are utilized in developing their teacher leadership?
2. What select leadership attributes do novice teachers report they possess after two years of involvement in an induction program?
3. What teacher leadership roles do novice teachers report are present in the first two years of teaching and what is their level of engagement in these leadership opportunities?
4. To what degree do novice teachers report that their engagement in leadership opportunities benefits them and their school districts?

The next section will overview the data analysis process by research question, followed by two sections of inferential results.

Basic statistical computations including means, rank order correlation, and statistical confidence were employed to analyze the data. All data were downloaded into the Statistical Package for Social Sciences (Nie, et al., 1970) for analysis.

In the analysis of the data, two questionnaire statements appeared to exemplify new teachers' perceptions of their current and future capacity for teacher leadership: Questionnaire statement 10, sub statement 8 - "I feel that I have the potential to become a teacher leader" and questionnaire statement 10, sub statement 9 - "I feel that I am currently a teacher leader." The

decision was made to examine the responses to those two statements and use them to define three comparison groups for each statement.

Three groups were created, based on responses, to questionnaire statement 10, sub statement 8 - “I feel that I have the potential to become a teacher leader”

- Group 1 was comprised of the new teachers who either strongly disagreed or disagreed with the questionnaire statement ($n=2$)
- Group 2 teachers agreed with the questionnaire statement ($n=25$)
- Group 3 teachers strongly agreed with the questionnaire statement ($n=29$)

In addition, three groups were created, based on responses, to questionnaire statement 10, sub statement 9 - “I feel that I am currently a teacher leader”

- Group 1 was comprised of the new teachers who either strongly disagreed or disagreed with the response above ($n=13$)
- Group 2 teachers agreed with the questionnaire statement ($n=29$)
- Group 3 teachers strongly agreed with the questionnaire statement ($n=14$)

In consultation with a statistical advisor, it was determined that the respondents’ choices did not always result in a natural distribution (ns and percentages associated with response choices).

After an examination of the data, a decision was made to secure a more reasonable proportion of respondents by combining strongly disagree and disagree responses (hereafter Group 1). This convention is followed throughout the results section.

Using the three aforementioned groups established from responses to “I feel that I have the potential to become a teacher leader” (questionnaire statement 10, sub statement 8) and “I feel that I am currently a teacher leader” (questionnaire statement 10, sub statement 9), mean

scores of the groups' responses (treating them as a 4 point scale) to each questionnaire statement were computed in order to answer each research question. Then, the mean of each group's statements was ranked for each group of respondents (see above).

Inferential statistics were calculated to compare ranks among the three groups utilizing Spearman's Rank-Order Correlation, or Spearman's rho (denoted r_s), which is a measure of the strength of a relationship between the ranks of the means of paired data. Spearman's Rank-Order Correlation permits researchers to test the null hypothesis that there is no relationship between how members of each comparison group ranked their responses to the questionnaire statements. If the null is rejected, researchers entertain the possibility that there is a positive or negative relationship between how the two groups ranked questionnaire statements. In evaluating rank order for each questionnaire statement, the correlation coefficient (or r_s) was calculated to investigate the correlation between how members of groups ranked questionnaire statements. In addition, the level of statistical confidence was calculated for each correlation. This process was repeated in analyzing all four of the research question sections that follow.

Research Question One

What strategies or techniques do novice teachers report are utilized in developing their teacher leadership? The focus of the first research question was on the preparation of novice teachers in developing leadership, beginning with teacher preparation and throughout the first three years of teaching. Quantitative data pertaining to this research question were collected using statements from the novice teacher questionnaire distributed to third year teachers.

In Table 6 the " r_s " correlations and " p " statistical confidences across the three response groups (group 1: strongly disagree/disagree, group 2: agree, and group 3: strongly agree) for

mean ranks based on responses to “I feel that I have the potential to become a teacher leader,” related to the “development of leadership” (Q 10, 1-7 questionnaire statements), for third year teachers are reported. Development of teacher leaders included the following statements on the questionnaire:

- Learning from other teachers
- Being supported by other teachers
- Believing principals regard all teachers as leaders
- Agreeing that school culture encourages leadership for all teachers
- Perceiving principals support teachers as leaders
- Being provided with time to build leadership skills
- Being provided with opportunities to build collaboration skills

Table 6. Correlations among Ranks from Groups Related to Development of Teacher Leadership
($n=62$)

Groups	Ranks from Group 1	Ranks from Group 2	Ranks from Group 3
Group 1	1		
Group 2	* $r_s=.73$ * $p=.06$	1	
Group 3	* $r_s=.73$ * $p=.06$	* $r_s=.90$ *** $p=.01$	1

Note. Group 1=strongly disagree and disagree; Group 2= agree; Group 3=strongly agree
 r_s =Pearson Rank Order Correlation and * r_s =Strong Correlation (+/- .7-+/-1= Strong Correlation)
 p =Significance Level and * $p=.10$ and *** $p=.01$

Statistical analysis revealed that a strong positive relationship existed (.7-.9) and with at least 90% level of statistical confidence ($p < .10$) between the mean rankings of “development of teacher leadership” (Q10, 1-7 questionnaire statements) and mean rankings for all three groups as defined by Q10-8: “I feel that I have the potential to become a teacher leader.” Statistical analysis also presented a 99% level of statistical confidence ($p < .01$) between the mean rankings of “development of teacher leadership” (Q10, 1-7 questionnaire statements) and mean rankings for group 2 and group 3 as defined by Q10-8: “I feel that I have the potential to become a teacher leader.”

Providing more detailed information regarding Table 6, Table 7 includes the means and ranks of means for responses to each statement related to the development of leadership (Q 10, 1-7 questionnaire statements) based on groups’ responses from statement 10, sub statement 8: “I feel that I have the potential to become a teacher leader.” The mean column describes how each group responded to each statement (on a 1-4 point scale, where 1 = strongly disagree, 2 = disagree, 3 = agree, and 4 = strongly agree). Means are the average of the group’s responses;

therefore the reader will note that some means are identical. For example, in the Table 7 below, the mean response of Group 1 for “being supported by teachers,” “believing principals regard all teachers as leaders,” and “perceiving principals support teachers as leaders” were all 3.5. This means that the group, on average, was equally split between their response of agree (3) and strongly agree (4), thus the mean is 3.5 for the three statements. The ranks of means column describes how each statement ranked given the mean response. The reader may also notice that some statements are ranked equally or with half ranks. For example, in Table 7 below, there are two ranks of 2.5. This signifies that these two statements “shared” a rank of 2 and 3 out of seven statements and thus are ranked the same.

Table 7. Mean Scores and Rank Scores from Groups Related to Development of Teacher Leadership ($n=62$)

	Groups based on responses to “I feel that I have the potential to become a teacher leader.”					
	Group 1: Strongly Disagree/Disagree ($n=2$)		Group 2: Agree ($n=25$)		Group 3: Strongly Agree ($n=29$)	
Development of Leadership Statements	Mean	Rank of Means	Mean	Rank of Means	Mean	Rank of Means
Learning from other teachers	2	7	3	4	3.8	4
Being supported by other teachers	3.5	2	3.3	1	3.8	2.5
Believing principals regard all teachers as leaders	3.5	2	3.1	3	3.8	2.5
Agreeing that school culture encourages leadership for all teachers	3	4	2.9	5	3.7	5
Perceiving principals support teachers as leaders	3.5	2	3.2	2	3.8	1
Being provided with time to build leadership skills	2.5	5.5	2.7	6	3.6	7
Being provided with opportunities to build collaboration skills	2.5	5.5	2.7	7	3.6	6

In Table 8 the “ r_s ” correlations and “ p ” statistical confidences across the three response groups (group 1: strongly disagree/disagree, group 2: agree, and group 3: strongly agree) for mean ranks based on responses to “I feel that I am currently a teacher leader” related to the “development of leadership” (Q 10, 1-7 questionnaire statements), for third year teachers are reported. Development of teacher leaders included the following statements on the questionnaire:

- Learning from other teachers
- Being supported by other teachers
- Believing principals regard all teachers as leaders

- Agreeing that school culture encourages leadership for all teachers
- Perceiving principals support teachers as leaders
- Being provided with time to build leadership skills
- Being provided with opportunities to build collaboration skills

Table 8. Correlations among Ranks from Groups Related to Development of Teacher Leadership
($n=62$)

	Ranks from Group 1	Ranks from Group 2	Ranks from Group 3
Ranks from Group 1	1		
Ranks from Group 2	* $r_s = .92$ *** $p = .003$	1	
Ranks from Group 3	$r_s = .37$ $p = .42$	$r_s = .02$ $p = .97$	1

Note. Group 1=strongly disagree and disagree; Group 2= agree; Group 3=strongly agree
 r_s =Spearman's Rank Order Correlation and * r_s =Strong Correlation
 p =Significance Level and *** $p = .01$

Statistical analysis indicated a strong positive relationship existed (.9) and with at least 99% level of statistical confidence ($p < .01$) between the mean rankings of “development of teacher leadership” (Q10, 1-7 questionnaire statements) and mean rankings for group 1 and group 2 as defined by Q10-9: “I feel that I am currently a teacher leader.”

Providing more detailed information regarding Table 8, Table 9 includes the means and ranks of means for responses to each statement related to the development of leadership (Q 10, 1-7 questionnaire statements) based on groups' responses from statement 10, sub statement 9: “I feel that I am currently a teacher leader.” Means are the average of the group's responses and the mean column describes how each group responded to each statement (on a 1-4 point scale, where

1 = strongly disagree, 2 = disagree, 3 = agree, and 4 = strongly agree). The ranks of means column describes how each statement ranked given the mean response. Some statements are ranked equally or with half ranks. For example, in the following Table 9, there are two ranks of 1.5. This signifies that these two ranks “shared” a rank of 1 and 2 out of seven statements and thus are ranked the same.

Table 9. Mean Scores and Rank Scores from Groups Related to Development of Teacher Leadership ($n=62$)

	Groups based on responses to “I feel that I am currently a teacher leader.”					
	Group 1: Strongly Disagree/Disagree ($n=13$)		Group 2: Agree ($n=29$)		Group 3: Strongly Agree ($n=14$)	
Development of Leadership Statements	Mean	Rank of Means	Mean	Rank of Means	Mean	Rank of Means
Learning from other teachers	3.2	4	3.2	5	3.9	1.5
Being supported by other teachers	3.5	1	3.5	1	3.8	4.5
Believing principals regard all teachers as leaders	3.2	3	3.4	2	3.8	4.5
Agreeing that school culture encourages leadership for all teachers	3	5	3.2	4	3.7	6
Perceiving principals support teachers as leaders	3.3	2	3.4	3	3.9	1.5
Being provided with time to build leadership skills	2.8	6.5	3.1	6	3.6	7
Being provided with opportunities to build collaboration skills	2.8	6.5	3.0	7	3.9	3

Summary of Significant Findings: Research Question One

Research question one focused on the preparation of novice teachers in developing leadership, beginning with teacher preparation and throughout the first three years of teaching. Correlations of relationships and statistical confidences among mean ranks from three groups (based on responses to “I feel that I have the potential to become a teacher leader” (Q 10-8) and “I feel that I am currently a teacher leader” (Q10-9) related to the “development of leadership” (Q10, 1-7 questionnaire statements) for third year teachers were analyzed.

The initial analysis of data revealed there was high correlation and 99% statistical confidence between those who agreed and highly agreed that they had the potential to be teacher leaders and how they ranked development of leadership skills. The three highest ranked statements associated with developing teacher leadership by the aforementioned group included:

- being supported by other teachers,
- perceiving that their principals support them as leaders,
- believing that their principals regard all teachers as leaders.

There was high correlation and statistical confidence between two groups of respondents to statement 10-9 (those who strongly disagreed/disagreed and those who agreed that they are currently teacher leaders) and how they ranked development of teacher leadership skills. The three highest ranked statements associated with developing teacher leadership by the aforementioned group included:

- being supported by other teachers,
- perceiving that their principals support them as leaders,
- believing that their principals regard all teachers as leaders.

In summary, third year teachers who either agreed or strongly agreed that they had the potential to become a teacher leader felt supported by other teachers, though this was not tested directly. In addition, they tended to strongly believe that principals supported them as leaders and perceived that all teachers were leaders. Teachers who strongly agreed that they were currently teacher leaders agreed with the aforementioned beliefs, but also ranked learning from other teachers and being provided with collaboration skills highly. Slightly less than one-third of the teachers surveyed thought that they were not provided with time to build their leadership skills and opportunities to build collaboration skills. The mean differences were not assessed, but the correlations tend to support these conclusions.

Research Question Two

What select leadership attributes do novice teachers report they possess after two years of involvement in an induction program? The focus of the second research question was on the particular attributes that are associated with leadership in novice teachers in their first three years of teaching. Quantitative data pertaining to this research question were collected using statements from the novice teacher questionnaire distributed to third year teachers.

In Table 10 the “ r_s ” correlations and “ p ” statistical confidences across the three response groups (group 1: strongly disagree/disagree, group 2: agree, and group 3: strongly agree) for mean ranks based on responses to “I feel that I have the potential to become a teacher leader,” related to “attributes of leadership” (Q11, 1-14 questionnaire statements) for third year teachers are reported. Attributes of leadership for third year teachers included the following statements on the questionnaire:

- Communication skills

- Improvement of teaching practice
- Confidence in teaching
- Problem-solving abilities
- Independence
- Flexibility
- Optimism

Table 10. Correlations among Ranks from Groups Related to Attributes of Teacher Leadership
($n=62$)

	Ranks from Group 1	Ranks from Group 2	Ranks from Group 3
Ranks from Group 1	1		
Ranks from Group 2	$r_s = .49$ * $p = .07$	1	
Ranks from Group 3	$r_s = .62$ ** $p = .02$	* $r_s = .83$ *** $p = .00$	1

Note. Group 1=strongly disagree and disagree; Group 2= agree; Group 3=strongly agree
 r_s =Spearman's Rank Order Correlation and * r_s =Strong Correlation
 p =Significance Level and * $p = .10$, ** $p = .05$ and *** $p = .01$

Statistical analysis depicted that a strong positive relationship existed (.8), with at least 99% level of statistical confidence ($p < .01$) between the mean rankings of “attributes of teacher leadership” (Q11, 1-14 questionnaire statements) and mean rankings for group 2 and group 3 as defined by Q10-8: “I feel that I have the potential to become a teacher leader.” Statistical analysis indicated a 90% level of statistical confidence ($p < .10$) between the mean rankings of “attributes of teacher leadership” (Q11, 1-14 questionnaire statements) and mean rankings for group 1 and group 2 as defined by Q10-8: “I feel that I have the potential to become a teacher

leader.” There was a 95% level of statistical confidence ($p < .05$) between the mean rankings of “attributes of teacher leadership” (Q11, 1-14 questionnaire statements) and mean rankings for group 1 and group 3 as defined by Q10-8: “I feel that I have the potential to become a teacher leader.”

Providing more detailed information regarding Table 10, Table 11 includes the means and ranks of means for responses to each statement related to the attributes of leadership (Q 11, 1-14 questionnaire statements) based on groups’ responses from statement 10-8: “I feel that I have the potential to become a teacher leader.” Means are the average of the group’s responses and the mean column describes how each group responded to each statement (on a 1-4 point scale, where 1 = strongly disagree, 2 = disagree, 3 = agree, and 4 = strongly agree). The ranks of means column describes how each statement ranked given the mean response. Some statements are ranked equally or with half ranks. For example, in Table 11 below, there are two ranks of 11.5. This signifies that these two ranks “shared” a rank of 11 and 12 out of fourteen statements and thus are ranked the same.

Table 11. Mean Scores and Rank Scores from Groups Related to Attributes of Teacher Leadership ($n=62$)

	Groups based on responses to “I feel that I have the potential to become a teacher leader.”					
	Group 1: Strongly Disagree/Disagree ($n=2$)		Group 2: Agree ($n=25$)		Group 3: Strongly Agree ($n=29$)	
Attribute Statements	Mean	Rank of Means	Mean	Rank of Means	Mean	Rank of Means
Develop communication skills	1	11.5	2.8	14	3.1	14
Possess communication skills	2	7	3.1	7	3.6	5
Develop teaching practice	3	3	3	9	3.6	6.5
Seek to improve teaching practice	3	3	3.3	3	3.9	1
Develop confidence in teaching	3	3	3.1	6	3.8	2
Possess confidence in teaching	1	11.5	3	10	3.5	11.5
Develop problem-solving abilities	2	7	2.9	11	3.5	11.5
Possess problem-solving abilities	1	11.5	3.2	5	3.6	8
Develop independence	2	11.5	3	8	3.5	9
Possess independence	3	3	3.5	1	3.7	4
Develop flexibility	2	7	2.8	12.5	3.5	10
Possess flexibility	3	3	3.4	2	3.6	6.5
Develop optimism	1	11.5	2.8	12.5	3.4	13
Possess optimism	1	11.5	3.3	4	3.7	3

In Table 12 the “ r_s ” correlations and “ p ” statistical confidences across the three response groups (group 1: strongly disagree/disagree, group 2: agree, and group 3: strongly agree) for mean ranks based on responses to “I feel that I am currently a teacher leader,” related to “attributes of leadership” (Q 11, 1-14 questionnaire statements) for third year teachers are

reported. Attributes of leadership for third year teachers included the following statements on the questionnaire:

- Communication skills
- Improvement of teaching practice
- Confidence in teaching
- Problem-solving abilities
- Independence
- Flexibility
- Optimism

Table 12. Correlations among Ranks from Groups Related to Attributes of Teacher Leadership
($n=62$)

	Ranks from Group 1	Ranks from Group 2	Ranks from Group 3
Ranks from Group 1	1		
Ranks from Group 2	* $r_s = .78$ *** $p = .001$	1	
Ranks from Group 3	$r_s = .57$ ** $p = .03$	* $r_s = .74$ *** $p = .003$	1

Note. Group 1=strongly disagree and disagree; Group 2= agree; Group 3=strongly agree
 r_s =Spearman's Rank Order Correlation and * r_s =Strong Correlation
 p =Significance Level and ** $p = .05$ and *** $p = .01$

Statistical analysis revealed that a strong positive relationship existed (.7-.8) between the mean rankings of “attributes of teacher leadership” (Q11, 1-14 questionnaire statements) and mean rankings for group 1 and group 2 and group 2 and group 3 as defined by Q10-9: “I feel that

I am currently a teacher leader.” Statistical analysis indicated a 95% level of statistical confidence existed ($p < .05$) between the mean rankings of “attributes of teacher leadership” (Q11, 1-14 questionnaire statements) and mean rankings for group 1 and group 3 as defined by Q10-9: “I feel that I am currently a teacher leader.” There is a 99% level of statistical confidence ($p < .01$) between the mean rankings of “attributes of teacher leadership” (Q11, 1-14 questionnaire statements) and mean rankings for group 1 and group 2 and group 2 and group 3 as defined by Q10-9: “I feel that I am currently a teacher leader.”

Providing more detailed information regarding Table 12, Table 13 includes the means and ranks means for responses to each statement related to the attributes of leadership (Q 11, 1-14 questionnaire statements) based on groups’ responses from statement 10-9: “I feel that I am currently a teacher leader.” Means are the average of the group’s responses and the mean column describes how each group responded to each statement (on a 1-4 point scale, where 1 = strongly disagree, 2 = disagree, 3 = agree, and 4 = strongly agree). The ranks of means column describes how each statement ranked given the mean response. Some statements are ranked equally or with half ranks. For example, in Table 13 below, there are two ranks of 10.5. This signifies that these two ranks “shared” a rank of 10 and 11 out of fourteen statements and thus are ranked the same.

Table 13. Mean Scores and Rank Scores from Groups Related to Attributes of Teacher Leadership ($n=62$)

	Groups based on responses to “I feel that I am currently a teacher leader.”					
	Group 1: Strongly Disagree/Disagree ($n=13$)		Group 2: Agree ($n=29$)		Group 3: Strongly Agree ($n=14$)	
Attribute Statements	Mean	Rank of Means	Mean	Rank of Means	Mean	Rank of Means
Develop communication skills	2.7	13.5	2.9	14	3.1	14
Possess communication skills	2.9	10.5	3.4	6	3.7	7
Develop teaching practice	3.2	5	3.1	8	3.7	7
Seek to improve teaching practice	3.4	2	3.6	1.5	3.9	1
Develop confidence in teaching	3.2	5	3.4	4	3.8	4
Possess confidence in teaching	2.9	10.5	3.0	12	3.7	7
Develop problem-solving abilities	3.1	7.5	3.0	13	3.6	10.5
Possess problem-solving abilities	3.0	9	3.2	7	3.9	2.5
Develop independence	3.2	5	3.1	9	3.6	10.5
Possess independence	3.6	1	3.6	1.5	3.7	7
Develop flexibility	2.8	12	3.1	10	3.6	12.5
Possess flexibility	3.3	3	3.5	3	3.7	7
Develop optimism	2.7	13.5	3.0	11	3.6	12.5
Possess optimism	3.1	7.5	3.4	5	3.9	2.5

Summary of Significant Findings: Research Question Two

Research question two focused on particular attributes that are associated with leadership in novice teachers in their first three years of teaching. Correlations of relationships and statistical confidences among ranks from three groups (based on responses to “I feel that I have

the potential to become a teacher leader” (Q 10-8) and “I feel that I am currently a teacher leader” (Q10-9) related to the “leadership attributes” (Q11, 1-14 questionnaire statements) for third year teachers were analyzed.

The initial analysis of data indicated there was a high correlation between two groups of respondents to statement 10-8 (those who agreed and strongly agreed that they had the potential to be teacher leaders) and how they ranked teacher leadership attributes. In addition, there was high statistical confidence, but not high correlation among the three groups of respondents (those who disagreed/strongly disagreed, agreed, or strongly agreed that they had the potential to be teacher leaders) and how they ranked teacher leadership attributes. The five highest ranked statements associated with leadership attributes possessed, or those being developed, by novices who either agreed or strongly agreed that they had the potential to become a teacher leader included:

- seeking improvement of own teaching practice,
- believing that their principals and /or induction leaders help to build teaching confidence,
- being independent most of the time,
- possessing flexibility when the situation does not go as planned,
- possessing optimism.

There was a high correlation and statistical confidence between two sets of groups of respondents to statement 10-9 (those who disagreed/strongly disagreed with those who agreed that they are currently teacher leaders and those who agreed with those who strongly agreed) and how they ranked teacher leadership attributes. The three highest ranked statements associated

with leadership attributes possessed, or those being developed, by novices who disagreed/strongly disagreed and those who agreed that they were currently teacher leaders included:

- seeking improvement of own teaching practice,
- being independent most of the time,
- possessing flexibility when the situation does not go as planned.

The highest ranked statement associated with leadership attributes possessed, or being developed, by novices who agreed and those who strongly agreed that they were currently teacher leaders included:

- seeking improvement of own teaching practice

Interestingly, slightly less than one-third of the third year teachers disagreed that their principal and/or induction leader helped them develop the attribute of communication skills-critical to teacher leadership.

Research Question Three

What teacher leadership roles do novice teachers report are present in the first two years of teaching and what is their level of engagement in these leadership opportunities? The focus of the third research question was on leadership roles with which new teachers may become involved in their first three years of teaching. Quantitative data pertaining to this research question were collected using statements from the novice teacher questionnaire distributed to third year teachers.

In Table 14 the “ r_s ” correlations and “ p ” statistical confidences across the three response groups (group 1: strongly disagree/disagree, group 2: agree, and group 3: strongly agree) for

mean ranks based on responses to “I feel that I have the potential to become a teacher leader,” related to the “engagement in teacher leadership roles” (Q12, questionnaire statements 1-8) for third year teachers are reported. Engagement in leadership roles for third year teacher statements included the following statements on the questionnaire:

- Developing expertise
- Becoming more confident
- Sharing teaching practices
- Reflecting on teaching and learning
- Increasing teaching effectiveness and professionalism
- Furthering professional learning
- Observing other teachers
- Having mentoring conversations

Table 14. Correlations among Ranks from Groups Related to Engagement in Teacher Leadership Roles ($n=62$)

	Ranks from Group 1	Ranks from Group 2	Ranks from Group 3
Ranks from Group 1	1		
Ranks from Group 2	* $r_s = -.88$ *** $p = .004$	1	
Ranks from Group 3	$r_s = -.51$ $p = .20$	* $r_s = .75$ ** $p = .03$	1

Note. Group 1=strongly disagree and disagree; Group 2= agree; Group 3=strongly agree
 r_s =Spearman's Rank Order Correlation and * r_s =Strong Correlation
 p =Significance Level and ** $p = .05$ and *** $p = .01$

Statistical analysis revealed that a strong positive relationship existed (.8) and with at least 95% level of statistical confidence ($p < .05$) between the mean rankings of “engagement in teacher leadership roles” (Q12, 1-8 questionnaire statements) and mean rankings for group 2 and group 3 as defined by Q10-8: “I feel that I have the potential to become a teacher leader.”

Statistical analysis also indicated a strong negative relationship existed (-.9) and with at least 99% level of statistical confidence ($p < .01$) between the mean rankings of “engagement in teacher leadership roles” (Q12, 1-8 questionnaire statements) and mean rankings for group 1 and group 2 as defined by Q10-8: “I feel that I have the potential to become a teacher leader.”

Providing more detailed information regarding Table 14, Table 15 includes the means and ranks of means for responses to each statement related to engagement in teacher leadership roles (Q 12, 1-8 questionnaire statements) based on groups' responses from statement 10, sub statement 8: “I feel that I have the potential to become a teacher leader.” Means are the average of the group's responses and the mean column describes how each group responded to each statement (on a 1-4 point scale, where 1 = strongly disagree, 2 = disagree, 3 = agree, and 4 =

strongly agree). The ranks of means column describes how each statement ranked given the mean response. Some statements are ranked equally or with half ranks. For example, in Table 15 below, there are two ranks of 1.5. This signifies that these two ranks “shared” a rank of 1 and 2 out of eight statements and thus are ranked the same.

Table 15. Mean Scores and Rank Scores from Groups Related to Engagement in Teacher Leadership Roles ($n=62$)

	Groups based on responses to “I feel that I have the potential to become a teacher leader.”					
	Group 1: Strongly Disagree/Disagree ($n=2$)		Group 2: Agree ($n=25$)		Group 3: Strongly Agree ($n=29$)	
Leadership Role Statements	Mean	Rank of Means	Mean	Rank of Means	Mean	Rank of Means
Developing expertise	3	6.5	3.2	4	3.7	4
Becoming more confident	3	6.5	3.5	1	3.8	1.5
Sharing teaching practices	2	2.5	3	6.5	3.7	4
Reflecting on teaching and learning	2	2.5	3	6.5	3.6	6.5
Increasing teaching effectiveness and professionalism	3	6.5	3.4	2	3.8	1.5
Furthering professional learning	3	6.5	3.3	3	3.6	6.5
Observing other teachers	2	2.5	3.2	5	3.7	4
Having mentoring conversations	2	2.5	2.8	8	3.1	8

In Table 16 the “ r_s ” correlations and “ p ” statistical confidences across the three response groups (group 1: strongly disagree/disagree, group 2: agree, and group 3: strongly agree) for mean ranks based on responses to “I feel that I am currently a teacher leader,” related to the “engagement in teacher leadership roles” (Q12, questionnaire statements 1-8) for third year

teachers are reported. Engagement in leadership roles for third year teacher statements included the following statements on the questionnaire:

- Developing expertise
- Becoming more confident
- Sharing teaching practices
- Reflecting on teaching and learning
- Increasing teaching effectiveness and professionalism
- Furthering professional learning
- Observing other teachers
- Having mentoring conversations

Table 16. Correlations among Ranks from Groups Related to Engagement in Teacher Leadership Roles ($n=62$)

	Ranks from Group 1	Ranks from Group 2	Ranks from Group 3
Ranks from Group 1	1		
Ranks from Group 2	* $r_s = .86$ *** $p = .006$	1	
Ranks from Group 3	$r_s = .64$ * $p = .09$	$r_s = .36$ $p = .38$	1

Note. Group 1=strongly disagree and disagree; Group 2= agree; Group 3=strongly agree
 r_s =Spearman's Rank Order Correlation and * r_s =Strong Correlation
 p =Significance Level and * $p = .10$ and *** $p = .01$

Statistical analysis revealed that a strong positive relationship existed (.9) and with at least 99% level of statistical confidence ($p < .01$) between the mean rankings of “engagement in teacher leadership roles” (Q12, 1-8 questionnaire statements) and mean rankings for group 1 and group 2 as defined by Q10-9: “I feel that I am currently a teacher leader.”

Providing more detailed information regarding Table 16, Table 17 includes the means and ranks of means for responses to each statement related to engagement in teacher leadership roles (Q 12, 1-8 questionnaire statements) based on groups' responses from statement 10-9: "I feel that I am currently a teacher leader." Means are the average of the group's responses and the mean column describes how each group responded to each statement (on a 1-4 point scale, where 1 = strongly disagree, 2 = disagree, 3 = agree, and 4 = strongly agree). The ranks of means column describes how each statement ranked given the mean response. Some statements are ranked equally or with half ranks. For example, in Table 17 there are two ranks of 6.5. This signifies that these two ranks "shared" a rank of 6 and 7 out of eight statements and thus are ranked the same.

Table 17. Mean Scores and Rank Scores from Groups Related to Engagement in Teacher Leadership Roles ($n=62$)

	Groups based on responses to “I feel that I am currently a teacher leader.”					
	Group 1: Strongly Disagree/Disagree ($n=13$)		Group 2: Agree ($n=29$)		Group 3: Strongly Agree ($n=14$)	
Leadership Role Statements	Mean	Rank of Means	Mean	Rank of Means	Mean	Rank of Means
Developing expertise	3.4	4	3.3	4.5	3.9	2
Becoming more confident	3.8	1	3.4	2	3.9	2
Sharing teaching practices	3.1	6.5	3.3	4.5	3.8	4.5
Reflecting on teaching and learning	3.1	6.5	3.2	7	3.7	6
Increasing teaching effectiveness and professionalism	3.6	2	3.5	1	3.8	4.5
Furthering professional learning	3.4	4	3.4	3	3.6	7
Observing other teachers	3.4	4	3.3	6	3.9	2
Having mentoring conversations	3	8	2.8	8	3.2	8

Summary of Significant Findings: Research Question Three

Research question three focused on leadership roles in which new teachers may become involved in their first three years of teaching. Correlations of relationships and statistical confidences among ranks from three groups (based on responses to “I feel that I have the potential to become a teacher leader”) (Q 10-8) and “I feel that I am currently a teacher leader” (Q10-9) related to the “leadership roles in which new teachers may become involved” (Q12, 1-18 questionnaire statements) for third year teachers were analyzed.

Analysis of data exhibited a high correlation and high statistical confidence between two groups of respondents to statement 10-8 (those who agreed and strongly agreed that they had the potential to be teacher leaders) and how they ranked involvement in select teacher leadership roles. The two highest ranked questionnaire statements associated with engagement in teacher leadership roles (by novices who strongly agreed that they had the potential to become a teacher leader) included:

- becoming more confident in teaching abilities,
- increasing teaching effectiveness and professionalism.

Interestingly, there was high negative correlation and high statistical confidence between group one (those who strongly disagreed and disagreed that they had the potential to become a teacher leader) and group two (those who agreed they had the potential to become a teacher leader) and how they ranked involvement in select teacher leadership roles. In other words, these two groups disagreed in their rankings so strongly that they were highly negatively correlated with 99% statistical confidence.

There was high correlation and high statistical confidence between two groups of respondents to statement 10-9 (those who disagreed/strongly disagreed and those who agreed that they were currently teacher leaders) and how they ranked involvement in select teacher leadership roles. The two highest ranked questionnaire statements associated with engagement in teacher leadership roles (by novices who disagreed/strongly disagreed and those who agreed that they were currently teacher leaders) included:

- becoming more confident in teaching abilities,
- increasing teaching effectiveness and professionalism.

However questionnaire participants who strongly agreed that they were currently teacher leaders ranked the following engagement in teacher leadership roles highest (three ties in mean rankings):

- developing teaching expertise,
- becoming more confident,
- observing other teachers.

In summary, third year teachers who believed they had the potential to become a teacher leader strongly believed they were becoming more confident and were increasing their teacher effectiveness and professionalism, though this was not tested directly. Teachers who either agreed or strongly agreed they were currently teacher leaders tended to believe the same as the aforementioned group, but also cited the following as roles in which they were involved: developing teaching expertise and observing other teachers. Nine third year teachers cited they disagreed that they took opportunities to observe other teachers and engaged in mentoring conversations. The mean differences were not assessed, but the correlations tend to support these conclusions.

Research Question Four

To what degree do novice teachers report that their engagement in leadership opportunities benefits them and their school districts? The focus of research question four was on the benefits of new teachers engaging in leadership in their first three years of teaching. Quantitative data pertaining to this research question were collected using statements from the novice teacher questionnaire distributed to third year teachers.

In Table 18 the “ r_s ” correlations and “ p ” statistical confidences across the three response groups (group 1: strongly disagree/disagree, group 2: agree, and group 3: strongly agree) for mean ranks based on responses to “I feel that I have the potential to become a teacher leader,” related to the “benefits of new teachers engaging in leadership roles” (Q13, questionnaire statements 1-12) for third year teachers are reported. These benefits included the following statements on the questionnaire:

- Advancing teaching career
- Engaging with colleagues to share professional ideas, etc.
- Increasing teaching expertise and confidence
- Engaging in career-long learning
- Observing peers teaching and having mentoring conversations
- Being energized by engaging with colleagues
- Acquiring inspiration by collaborating with colleagues
- Making a difference for other teachers
- Impacting professional culture of building
- Engaging in professional conversations to deepen knowledge, etc.
- Developing a stronger sense of self as a contributing member
- Participating in the improvement of teaching and learning

Table 18. Correlations among Ranks from Groups Related to Benefits of New Teachers Engaging in Leadership Roles ($n=62$)

	Ranks from Group 1	Ranks from Group 2	Ranks from Group 3
Ranks from Group 1	1		
Ranks from Group 2	$r_s = -.60$ ** $p = .04$	1	
Ranks from Group 3	$r_s = -.67$ ** $p = .02$	$r_s = .57$ ** $p = .05$	1

Note. Group 1=strongly disagree and disagree; Group 2= agree; Group 3=strongly agree
 r_s =Spearman's Rank Order Correlation
 p =Significance Level and ** $p = .05$

Statistical analysis revealed a 95% level of statistical confidence existed ($p < .05$) between the mean rankings of “benefits of new teachers engaging in leadership roles” (Q13, 1-12 questionnaire statements) and mean rankings for all groups as defined by Q10-8: “I feel that I have the potential to become a teacher leader.”

Providing more detailed information regarding Table 18, Table 19 includes the means and rank of means for responses to benefits of new teachers engaging in leadership roles (Q 13, 1-12 questionnaire statements) based on groups' responses from statement 10-9: “I feel that I have the potential to become a teacher leader.” Means are the average of the group's responses and the mean column describes how each group responded to each statement (on a 1-4 point scale, where 1 = strongly disagree, 2 = disagree, 3 = agree, and 4 = strongly agree). The ranks of means column reports how each statement ranked given the mean response. Some statements are ranked equally or with half ranks. For example, in Table 19 below, there are four ranks of 7.5.

This reveals that these four ranks “shared” a rank of 7 and 8 out of twelve statements and thus are ranked the same.

Table 19. Mean Scores and Rank Scores from Groups Related to Benefits of New Teachers

Engaging in Leadership Roles ($n=62$)

	Groups based on responses to “I feel that I have the potential to become a teacher leader.”					
	Group 1: Strongly Disagree/Disagree ($n=2$)		Group 2: Agree ($n=25$)		Group 3: Strongly Agree ($n=29$)	
Benefits Statements	Mean	Rank of Means	Mean	Rank of Means	Mean	Rank of Means
Advancing teaching career	1	3	3	12	3.6	9.5
Engaging with colleagues to share professional ideas, etc.	1	3	3.1	7.5	3.6	6.5
Increasing teaching expertise and confidence	1	3	3.1	11	3.6	9.5
Engaging in career-long learning	3	11	3.1	7.5	3.7	3
Observing peers teaching and having mentoring conversations	3	11	3.2	3	3.7	1.5
Being energized by engaging with colleagues	2	7.5	3.3	1	3.6	9.5
Acquiring inspiration by collaborating with colleagues	2	7.5	3.2	6	3.7	4.5
Making a difference for other teachers	2	7.5	3.1	9	3.5	12
Impacting professional culture of building	2	7.5	3.2	4.5	3.7	4.5
Engaging in professional conversations to deepen knowledge, etc.	3	11	3.3	2	3.7	1.5
Developing a stronger sense of self as a contributing member	1	3	3.2	4.5	3.6	6.5
Participating in the improvement of teaching and learning	1	3	3.1	10	3.6	9.5

In Table 20 the “*r*” correlations and “*p*” statistical confidences across the three response groups (group 1: strongly disagree/disagree, group 2: agree, and group 3: strongly agree) for mean ranks based on responses to “I feel that I am currently a teacher leader,” related to statements for “benefits of new teachers engaging in leadership roles” (Q13, questionnaire statements 1-12) for third year teachers are reported. These benefits included the following statements on the questionnaire:

- Advancing teaching career
- Engaging with colleagues to share professional ideas, etc.
- Increasing teaching expertise and confidence
- Engaging in career-long learning
- Observing peers teaching and having mentoring conversations
- Being energized by engaging with colleagues
- Acquiring inspiration by collaborating with colleagues
- Making a difference for other teachers
- Impacting professional culture of building
- Engaging in professional conversations to deepen knowledge, etc.
- Developing a stronger sense of self as a contributing member
- Participating in the improvement of teaching and learning

Table 20. Correlations among Ranks from Groups Related to Benefits of New Teachers

Engaging in Leadership Roles ($n=62$)

	Ranks from Group 1	Ranks from Group 2	Ranks from Group 3
Ranks from Group 1	1		
Ranks from Group 2	$r_s = .34$ $p = .29$	1	
Ranks from Group 3	$r_s = .32$ $p = .31$	$r_s = .13$ $p = .69$	1

Note. Group 1=strongly disagree and disagree; Group 2= agree; Group 3=strongly agree
 r_s =Spearman's Rank Order Correlation and p =Significance Level

Statistical analysis revealed that there was no strong positive relationship or statistical confidence existed between the mean rankings of “benefits of new teachers engaging in leadership roles” (Q13, 1-12 questionnaire statements) and mean rankings for any groups as defined by Q10-9: “I feel that I am currently a teacher leader.”

Providing more detailed information regarding Table 20, Table 21 includes the means and ranks of means for responses to benefits of new teachers engaging in leadership roles (Q 13, 1-12 questionnaire statements) based on groups' responses from statement 10-9: “I feel that I am currently a teacher leader.” Means are the average of the group's responses, and the mean column describes how each group responded to each statement (on a 1-4 point scale, where 1 = strongly disagree, 2 = disagree, 3 = agree, and 4 = strongly agree). The ranks of means column describes how each statement ranked given the mean response. Some statements are ranked equally or with half ranks. For example, in Table 21 below, there are two ranks of 11.5. This signifies that these two ranks “shared” a rank of 11 and 12 out of twelve statements and thus are ranked the same.

Table 21. Mean Scores and Rank Scores from Groups Related to Benefits of New Teachers

Engaging in Leadership Roles ($n=62$)

	Groups based on responses to “I feel that I am currently a teacher leader.”					
	Group 1: Strongly Disagree/Disagree ($n=13$)		Group 2: Agree ($n=29$)		Group 3: Strongly Agree ($n=14$)	
Benefits Statements	Mean	Rank of Means	Mean	Rank of Means	Mean	Rank of Means
Advancing teaching career	2.9	9	3.2	12	3.8	6.5
Engaging with colleagues to share professional ideas, etc.	2.9	9	3.3	5	3.8	6.5
Increasing teaching expertise and confidence	2.9	9	3.3	10.5	3.8	6.5
Engaging in career-long learning	3.3	3.5	3.3	8	3.8	6.5
Observing peers teaching and having mentoring conversations	3.3	2	3.4	2.5	3.9	1
Being energized by engaging with colleagues	3.4	1	3.3	8	3.8	6.5
Acquiring inspiration by collaborating with colleagues	3.2	5	3.3	8	3.8	6.5
Making a difference for other teachers	3	6.5	3.3	6	3.5	12
Impacting professional culture of building	3	6.5	3.4	2.5	3.8	6.5
Engaging in professional conversations to deepen knowledge, etc.	3.3	3.5	3.5	1	3.8	6.5
Developing a stronger sense of self as a contributing member	2.9	11.5	3.4	4	3.8	6.5
Participating in the improvement of teaching and learning	2.9	11.5	3.3	10.5	3.8	6.5

Summary of Significant Findings: Research Question Four

Research question four focused on benefits of new teachers engaging in leadership in their first three years of teaching. Correlations of relationships and statistical confidences among ranks from three groups (based on responses to “I feel that I have the potential to become a teacher leader” (Q 10-8) and “I feel that I am currently a teacher leader” (Q10-9) related to the “leadership roles in which new teachers may become involved” (Q13, 1-12 questionnaire statements) for third year teachers were analyzed.

Analysis of data indicated high statistical confidence among the three groups of respondents to statement 10-8 (those who disagreed/strongly disagreed, agreed, and strongly agreed that they had potential to be a teacher leader) and how they ranked benefits from teacher leadership. However, there was no correlation among the three groups and how they ranked benefits from teacher leadership, although there the correlation between those who disagreed/strongly disagreed and those who either agreed or strongly agreed that they had the potential to be a teacher leader was negative.

The highest consistently ranked questionnaire statements associated with benefits of teacher leadership by respondents who either agreed or strongly agreed that they had the potential to become a teacher leader included:

- observing peers teaching and having mentoring conversations,
- engaging in professional conversations to deepen knowledge.

Analysis of data indicated there no high correlation or statistical confidence among the three groups of respondents to statement 10-9 (those who disagreed/strongly disagreed, agreed,

and strongly agreed that they were currently teacher leaders) and how they ranked benefits from teacher leadership.

The three highest ranked questionnaire statements associated with benefits of teacher leadership by respondents who agreed that they were currently teacher leaders included:

- observing peers teaching and having mentoring conversations,
- impacting the professional culture of building,
- engaging in professional conversations to deepen knowledge.

The two highest ranked questionnaire statements associated with benefits of teacher leadership by respondents who strongly agreed that they were currently teacher leaders included:

- observing peers teaching and having mentoring conversations,
- acquiring inspiration by collaborating with colleagues.

In summary, the majority of third year teachers perceived there were benefits of new teachers engaging in teacher leadership; however, there was not a strong correlation in the relationship between how the three groups ranked the mean scores.

Total Results Summary

Data from 62 third year teachers were analyzed to examine perceptions of induction programming and teacher leadership. Teachers' responses were examined to investigate their perceptions regarding development of leadership, leadership attributes, leadership roles in which teachers are engaged, and benefits of leadership. Basic statistical computations including means, rank order correlation, and statistical confidence were employed to study the data. Responses to the two questionnaire statements were examined, "I feel that I have the potential to become a teacher leader" (statement 10, sub statement 8) and "I feel that I am currently a teacher leader"

(statement 10, sub statement 9) to define each of the three groups (Group 1: strongly disagree/disagree, Group 2: agree, and Group 3: strongly agree). Using the three groups established from responses to statement 10, sub statement 8 and statement 10, sub statement 9 prompts, the mean scores (4 point scale) were computed and ranked for each research question (develop leadership, leadership attributes, leadership roles, and benefits of leadership). Then mean ranks among groups' responses utilizing rank order correlation were compared. The correlation coefficient (or " r_s ") was calculated to investigate the correlation between how each of the two groups ranked statements within each research question. In addition, statistical confidence was calculated for each correlation.

Chapter five presents the findings of the study, explains the relationship of findings to the current review of literature, draws conclusions and offers recommendations on developing teacher leadership through induction programming, and offers recommendations for further study.

Chapter V: SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Research Overview

Chapter five provides a summary of the study that includes the research problem, purpose, methods, description of sample, and data analysis. In addition, conclusions and discussion of the findings for each research question are provided, followed by limitations of the study, recommendations for stakeholders, and further research.

Classroom teachers have the most influence on student learning (Goldrick, 2009). In order for new teachers to be effective, they require support through comprehensive induction programs during their first three years of teaching (Stanulis & Floden, 2009). As part of induction programming, teacher leadership should be an essential focus in supporting new teachers (Stanulis, Burrill & Ames, 2007). Teacher leadership "...is about mobilizing the still largely untapped attributes of teachers to strengthen student performance at ground level and working toward real collaboration, a locally tailored kind of shared leadership, in the daily life of the school" (School Leadership for the 21st Century Initiative, 2001, p. 4).

In examining the literature on a leadership pathway for novice teachers, there appeared to be little information on the inclusion of teacher leadership components in induction programs. Few studies reported on the actual components to include in a comprehensive, systematic teacher leadership pathway during a novice teacher's first three years of teaching. There appeared to be limited opportunities for novice teachers to gain teacher leadership skills in their first three years of teaching.

The purpose of the study was to examine novice teachers' awareness, beliefs, and perceptions regarding inclusion of and participation in a teacher leadership pathway. The goal of

conducting the study was to investigate the manner in which teacher leadership was developed, attributes that third year teachers perceived they possessed, teacher leadership roles and opportunities in which new teachers were engaged, and the benefits of leadership.

Research Framework and Questions

Research questions for the study align with the literature reported in Chapter two, “Framework for Teacher Leadership Elements” (Figure 1.1, p. 21). The framework summarizes findings from the review of literature related to teacher leadership pathways for novice teachers. Research questions align with each component in the framework. As outlined in Chapters one and three, the “Framework for Teacher Leadership Elements” includes the following elements:

- Seven Components for Cultivating Teacher Leadership in Novice Teachers: (1) all teachers as leaders; (2) administrative support; (3) teacher leadership knowledge, skills and dispositions; (4) time to succeed as leaders; (5) supportive culture; (6) collaboration with colleagues; and (7) professional development.
- Four Components for Identifying and Creating Roles and Opportunities for Novice Teachers to Lead: (1) peer observation with reciprocal mentoring; (2) career-long learning; (3) teaching expertise and confidence; and (4) engagement with colleagues to dialogue, hone reflection of practice, share work, and develop efficacy and professionalism.
- Four Components for Communicating Benefits of Leadership for Novice Teachers to All Stakeholders: (1) novice teacher advancement; (2) democratic school culture; (3) school improvement; and (4) re-culturing schools.

The following research questions align with the teacher leadership elements and were examined in the study:

1. What strategies or techniques do novice teachers report are utilized in developing their teacher leadership?
2. What select leadership attributes do novice teachers report they possess after two years of involvement in an induction program?
3. What teacher leadership roles do novice teachers report are present in the first two years of teaching and what is their level of engagement in these leadership opportunities?
4. To what degree do novice teachers report that their engagement in leadership opportunities benefits them and their school districts?

Research Instrumentation

The study's online questionnaire (Appendix B) was developed by creating a matrix (Appendix A) from the four research questions, which were based on the conceptual framework, or "Framework of Teacher Leadership Elements" (Figure 1.1, p. 20). Research questions were listed, and elements from the conceptual framework were aligned under each question. These elements served as the basis of the questionnaire statements.

The questionnaire was pilot tested for clarity and alignment to the research questions and the study's conceptual framework. The questionnaire was administered to a St. Cloud State University doctoral cohort and four, third year teachers who were not study participants. Feedback was provided regarding clarity of statements, understanding of terms, and length of questionnaire. The completed version of the questionnaire was clear, accurate, and concise. After

review by the dissertation committee, the questionnaire was submitted to the IRB office for approval.

Description of Sample

Minnesota school districts were analyzed to determine the number of years of induction programming they provided to novice teachers. Districts were selected to be contacted for questionnaire distribution if leaders offered at least two years of support to novice teachers. Eighteen Minnesota school districts' induction leaders agreed to conduct the research with their third year educators. Online questionnaires were administered to novice teachers in their third year of teaching, who had previously completed two years of prior induction programming. While one hundred eighty-eight third year teachers participated in the questionnaire, one hundred twenty-six were exited out of the process, either because they had more than three years of experience or they could not confirm two years of prior induction programming experience. Sixty-two, third year teachers completed the entire questionnaire and were accepted as study participants.

Data Analysis

Basic statistical computations including means, rank order correlation, and statistical confidence were employed to analyze the data. All data were downloaded into the Statistical Package for Social Sciences (Nie, et al., 1970) for analysis.

In the analysis of the data, two questionnaire statements appeared to exemplify new teachers' perceptions of their current and future capacity for teacher leadership: Questionnaire statement 10, sub statement 8 - "I feel that I have the potential to become a teacher leader" and questionnaire statement 10, sub statement 9 - "I feel that I am currently a teacher leader." The

decision was made to examine the responses to those two statements and use them to define three comparison groups for each statement.

Three groups were created, based on responses, to questionnaire statement 10, sub statement 8 - “I feel that I have the potential to become a teacher leader”

- Group 1 was comprised of the new teachers who either strongly disagreed or disagreed with the questionnaire statement ($N=2$)
- Group 2 teachers agreed with the questionnaire statement ($N=25$)
- Group 3 teachers strongly agreed with the questionnaire statement ($N=29$)

In addition, three groups were created, based on responses, to questionnaire statement 10, sub statement 9 - “I feel that I am currently a teacher leader”

- Group 1 was comprised of the new teachers who either strongly disagreed or disagreed with the response above ($N=13$)
- Group 2 teachers agreed with the questionnaire statement ($N=29$)
- Group 3 teachers strongly agreed with the questionnaire statement ($N=14$)

In consultation with a statistical advisor, it was determined that the respondents’ choices did not always result in a natural distribution (N s and percentages associated with response choices).

After an examination of the data, a decision was made to secure a more reasonable proportion of respondents by combining strongly disagree and disagree responses (hereafter Group 1). This convention is followed throughout the results section.

Using the three aforementioned groups established from responses to “I feel that I have the potential to become a teacher leader” (questionnaire statement 10, sub statement 8) and “I feel that I am currently a teacher leader” (questionnaire statement 10, sub statement 9), mean

scores of the groups' responses (treating them as a 4 point scale) to each questionnaire statement were computed in order to answer each research question. Then, the mean of each group's statements was ranked for each group of respondents (see above).

Inferential statistics were calculated to compare ranks between the three groups utilizing Spearman's Rank-Order Correlation, or Spearman's rho (denoted r_s), which is a measure of the strength of a relationship between the ranks of the means of paired data. Spearman's Rank-Order Correlation permits researchers to test the null hypothesis that there is no relationship between how members of each comparison group ranked their responses to the questionnaire statements. If the null is rejected, researchers entertain the possibility that there is a positive or negative relationship between how the two groups ranked questionnaire statements. In evaluating rank order for each questionnaire statement, the correlation coefficient (or r_s) was calculated to investigate the correlation between how members of groups ranked questionnaire statements. In addition, the level of statistical confidence was calculated for each correlation. This process was repeated in analyzing all four of the research question sections.

Conclusions and Discussion by Research Question

The conclusions and discussion from the study results are presented in this section and organized by research question, with supporting findings from the literature review.

Research question one. What strategies or techniques do novice teachers report are utilized in developing their teacher leadership? Research question one focused on the preparation of novice teachers in developing leadership, beginning with teacher preparation and throughout the first three years of teaching. Bond (2011) wrote that because of the immediate demands placed on new teachers, developing their qualifications should be an element of the pre-service

experience. In addition, new teacher programs must develop the capacity for novice teachers to become leaders from the first day of teaching well into their experienced years (Moir & Gless, 2001).

The results of research question one, presented in Chapter four, analyzed correlations of relationships and statistical confidence among ranks of means from three groups (based on responses to “I feel that I have the potential to become a teacher leader” (Q 10-8) and “I feel that I am currently a teacher leader” (Q10-9) related to the “development of leadership” (Q10, 1-7 questionnaire statements) for third year teachers. The initial analysis of data revealed there was high correlation and 99% statistical confidence between those who agreed and highly agreed that they had the potential to be teacher leaders and how they ranked development of leadership skills. The three highest ranked statements associated with developing teacher leadership by the aforementioned group included:

- being supported by other teachers,
- perceiving that their principals support them as leaders,
- believing that their principals regard all teachers as leaders.

Third year teachers who either agreed or strongly agreed with the statement, “I feel that I have the potential to become a teacher leader” (96.4%) either agreed or strongly agreed with the first five of seven questionnaire statements related to development of teacher leadership.

However, these teachers who only strongly agreed (51.8%) with the former statement also strongly agreed with all seven questionnaire statements related to the development of teacher leadership. In summary, the majority of third year teachers who strongly agreed they had the potential to become a leader perceived they were being developed for this future role by:

- learning from other teachers,
- being supported by other teachers,
- believing that their principals regard all teachers as leaders,
- agreeing that their school culture encourages leadership for all teachers,
- perceiving that their principals support them as leaders,
- being provided with time to build teacher leadership skills,
- being provided with opportunities to build collaboration skills.

The three highest ranked statements associated with developing teacher leadership by respondents who either agreed or strongly agreed that they had the potential to become a teacher leader included:

- being supported by other teachers,
- perceiving that their principals support them as leaders,
- believing that their principals regard all teachers as leaders.

There was high correlation and statistical confidence between two groups of respondents to statement 10-9 (those who strongly disagreed/disagreed and those who agreed that they were currently teacher leaders) and how they ranked development of teacher leadership skills. The three highest ranked statements associated with developing teacher leadership by the aforementioned group included:

- being supported by other teachers,
- perceiving that their principals support them as leaders,
- believing that their principals regard all teachers as leaders.

Third year teachers who either agreed or strongly agreed with the statement, “I feel that I am currently a teacher leader” (76.8%) either agreed or strongly agreed with the first six of seven questionnaire statements listed related to development of teacher leadership. These teachers who only strongly agreed (25%) with the former statement strongly agreed with all seven questionnaire statements related to the development of teacher leadership listed below. In summary, third year teachers who strongly agreed they were currently teacher leaders perceived they were being developed for this future role by:

- learning from other teachers,
- being supported by other teachers,
- believing that their principals regard all teachers as leaders,
- agreeing that their school culture encourages leadership for all teachers,
- perceiving that their principals support them as leaders,
- being provided with time to build teacher leadership skills,
- being provided with opportunities to build collaboration skills.

I believe that third year teachers who strongly agreed they had the potential to become leaders, and are currently leaders, are part of induction programs that include development of leadership components as outlined in the study. Therefore, the districts seem to be including all of the leadership components outlined in the conceptual framework to support new teachers. District leaders are building in time for new teachers to collaborate with, be supported by, and learn from other teachers. In addition, leaders have built a culture of leadership expectation for all teachers and support them with time and a positive culture.

The findings associated with the first research question are consistent with the literature on developing leadership in novice teachers. Developing leadership capacity must occur in comprehensive induction programs. Cultivating leadership capacity involves several goals, including collaborative learning, developing all adults in the school community, achievement of continual and ongoing improvement in student performance, participation in the professional community, and building of leadership dispositions. In addition to developing all adults to be leaders and striving for ongoing achievement, Harris and Lambert (2003) wrote that a significant element in the development of leadership includes collaboration or “the notion of learning together, and the construction of meaning and knowledge collectively and collaboratively” (p. 6). Overall, the study’s third year teachers who believed they had the potential to become leaders or believed they were currently leaders had completed two years of induction programming and either agreed or strongly agreed that their leadership was being developed.

Findings were found to be inconsistent with the literature reviewed, in regard to barriers to teacher leadership. Barriers identified from the research reviewed, included: a lack of a systematic and consistent effort to promote teachers as leaders, evoking leadership from all teachers, lack of time for leadership development, and lack of support from principals and colleagues (Berry & Wieder, 2013; Carver & Meier, 2013; Lambert, 2003). Third year teachers who participated in the study appeared to be employed by school districts with leaders who had minimized these barriers.

I believe that school district leaders are developing teacher leaders through comprehensive programming, but may be doing so unwittingly. In other words, when new teachers participate in at least two years of induction programming, they are more apt to have

opportunities to work with other teachers, be supported by veteran teachers, work for a principal that supports them and leadership development, and be provided with time and opportunities to build leadership skills. However, my belief is that the development of leaders through induction programming is a natural outcome and one that is not intentionally planned.

Research question two. What select leadership attributes do novice teachers report they possess after two years of involvement in an induction program? Research question two was focused on particular attributes that are associated with leadership in novice teachers in their third year of teaching. When teacher leaders are encouraging and supportive of their colleagues, accept challenges, engage in decision-making, and believe they can make a difference in the school environment, they are more effective leaders (Lemlech & Hertzog, 1998). Research reviewed identified those attributes that novice teachers, who are becoming teacher leaders, possess.

The results of research question two, presented in Chapter four, analyzed correlations of relationships and statistical confidence among ranks of means from three groups (based on responses to “I feel that I have the potential to become a teacher leader” (Q 10-8) and “I feel that I am currently a teacher leader” (Q10-9) related to the “leadership attributes” (Q11, 1-4 questionnaire statements) for third year teachers. The initial analysis of data indicated there was high correlation between two groups of respondents to statement 10-8 (those who either agreed or strongly agreed that they had the potential to be teacher leaders) and how they ranked teacher leadership attributes. In addition, there was high statistical confidence, but not high correlation among the three groups of respondents (those who either disagreed/strongly disagreed, agreed, or strongly agreed that they had the potential to be teacher leaders) and how they ranked teacher

leadership attributes. The five highest ranked statements associated with leadership attributes possessed, or being developed, by novices who either agreed or strongly agreed that they had the potential to become a teacher leader included:

- seeking improvement of own teaching practice,
- believing that their principals and /or induction leaders help to build teaching confidence,
- being independent most of the time,
- possessing flexibility when the situation does not go as planned,
- possessing optimism.

Third year teachers who either agreed or strongly agreed with the statement, “I feel that I have the potential to become a teacher leader” (96.4%) either agreed or strongly agreed with seven of fourteen questionnaire statements listed below related to leadership attributes. Teachers who only strongly agreed (51.8%) with the statement strongly agreed with all fourteen questionnaire statements related to the attributes of leadership. In summary, the majority of third year teachers who only strongly agreed they had the potential to become a leader perceived their principals and/or induction leaders were assisting them in developing select leadership attributes and that they possessed those attributes, all of which included:

- leaders help to develop communication skills,
- novice possesses communication skills
- leaders help to improve teaching practice,
- novice seeks to improve teaching practice,
- leaders build confidence in teaching,

- novice is confident in sharing expertise with colleagues,
- leaders help to increase problem-solving abilities,
- novice is comfortable with challenges,
- leaders help increase independence,
- novice is independent most of the time,
- leaders help increase flexibility,
- novice is flexible when things do not go as planned,
- leaders assist in developing optimism,
- novice is optimistic most of the time.

The three highest ranked leadership attributes possessed, or being developed, by novices who strongly agreed that they had the potential to become a teacher leader included:

- seek improvement of own teaching practice,
- believing that their principals and/or induction leaders help to build teaching confidence,
- possess optimism.

There was high correlation and statistical confidence between two sets of groups of respondents to statement 10-9 (those who disagreed/strongly disagreed with those who agreed that they were currently teacher leaders and those who agreed with those who strongly agreed) and how they ranked teacher leadership attributes. The three highest ranked statements associated with leadership attributes possessed, or being developed, by novices who disagreed/strongly disagreed and those who agreed that they were currently teacher leaders included:

- seeking improvement of own teaching practice,
- being independent most of the time,
- possessing flexibility when the situation does not go as planned.

The highest ranked statement associated with leadership attributes possessed, or being developed, by novices who agreed and those who strongly agreed that they were currently teacher leaders included:

- seeking improvement of own teaching practice

Interestingly, the one area that slightly less than one-third of the third year teachers disagreed with was that their principal and/or induction leader helped them develop communication skills-critical to teacher leadership.

Third year teachers who either agreed or strongly agreed with the statement, “I feel that I am currently a teacher leader” (76.8%) either agreed or strongly agreed with twelve of fourteen questionnaire statements related to leadership attributes (listed below). Teachers who strongly agreed (25%) with the former statement strongly agreed with all fourteen questionnaire statements related to leadership attributes. In summary, third year teachers who strongly agreed they were currently teacher leaders perceived their principals and/or induction leaders were assisting them in developing select leadership attributes and that they possessed those attributes, all of which included:

- leaders help to develop communication skills,
- novice possesses communication skills
- leaders help to improve teaching practice,
- novice seeks to improve teaching practice,

- leaders build confidence in teaching,
- novice is confident in sharing expertise with colleagues,
- leaders help to increase problem-solving abilities,
- novice is comfortable with challenges,
- leaders help increase independence,
- novice is independent most of the time,
- leaders help increase flexibility,
- novice is flexible when things do not go as planned,
- leaders assist in developing optimism,
- novice is optimistic most of the time.

I believe that third year teachers who strongly agreed they had the potential to become leaders and are currently leaders are part of induction programs that develop leadership attributes. In turn, the third year teachers who are part of comprehensive programs are more confident and believe they currently possess attributes of leadership as defined by the study. District leaders are either consciously or unconsciously developing leadership in new teachers as part of comprehensive induction programs and those novices are aware of their leadership attributes as a result.

The findings associated with the second research question are consistent with the literature reviewed regarding principals and/or induction leaders developing leadership attributes in novice teachers and the belief that those novices currently possess the attributes. In literature reviewed, teacher leadership skills develop when pre-service and novice teachers refine particular dispositions or attributes. Once novice teachers assume full-time, in-service positions,

Carver and Meier (2013) emphasized that their knowledge of teacher leader skills prepares them to assume leadership roles more quickly.

Teacher leaders are often described as “movers and shakers” as they possess a reform or improvement-oriented perspective (Carver & Meier, 2013). Along with being reform-minded, teacher leaders seek solutions to challenges, build confidence in others, and are reliable, truthful, open-minded, flexible, optimistic, resilient, and intrinsically motivated (Bond, 2011). When teacher leaders are encouraging and supportive of their colleagues, accept challenges, engage in decision-making, and believe they can make a difference in the school environment, they are more effective leaders (Lemlech & Hertzog, 1998). While the majority of third year teachers either agreed or strongly agreed that their principal and/or induction leader has helped them develop their communication skills, about one-third either disagreed or strongly disagreed that this has happened. Because communication skills are utilized in teacher leadership, this is an area that leaders should specifically attend to. Overall, third year teachers surveyed who believed they had the potential to become leaders or believed they were currently leaders indicated that district leaders have helped them develop leadership attributes. They also believed they currently possess the select teacher leadership attributes identified in the questionnaire.

Research question three. What teacher leadership roles do novice teachers report are present in the first two years of teaching and what is their level of engagement in these leadership opportunities? Research question three focused on leadership roles with which new teachers may become involved in their first three years of teaching. Knowledge and building of teacher leadership characteristics and development of skills leads novice teachers to practice leading both inside and outside of the classroom.

The results of research question three results, presented in Chapter four, analyzed correlations of relationships and statistical confidence among ranks of means from three groups (based on responses to “I feel that I have the potential to become a teacher leader” (Q 10-8) and “I feel that I am currently a teacher leader” (Q10-9) related to “leadership roles in which new teachers may become involved” (Q12, 1-18 questionnaire statements) for third year teachers. Analysis of data exhibited a high correlation and high statistical confidence between two groups of respondents to statement 10-8 (those who agreed and strongly agreed that they had the potential to be teacher leaders) and how they ranked involvement in select teacher leadership roles. The two highest ranked questionnaire statements associated with engagement in teacher leadership roles (by novices who strongly agreed that they had the potential to become a teacher leader) included:

- becoming more confident in teaching abilities,
- increasing teaching effectiveness and professionalism.

Interestingly, there was high negative correlation and high statistical confidence between group one (those who strongly disagreed and disagreed that they had the potential to become a teacher leader) and group two (those who agreed they had the potential to become a teacher leader) and how they ranked involvement in select teacher leadership roles. In other words, these two groups disagreed in their rankings so strongly that they were highly negatively correlated with 99% statistical confidence. Teachers who either disagreed or strongly disagreed they had the potential to become a leader believed had lower ranked means in the following areas of teacher leadership roles:

- developing teaching expertise,

- becoming more confident in teaching abilities,
- increasing teaching effectiveness and professionalism,
- furthering professional learning.

These third year teachers seem to be indicating that they were lacking opportunities to develop their expertise, learning, confidence and effectiveness. In contrast, teachers who either agreed or strongly agreed that they have the potential to be a teacher leader rated these statements high.

There seems to be a correlation between professional growth and teacher leadership according to these results.

Third year teachers who either agreed or strongly agreed with the statement, “I feel that I have the potential to become a teacher leader” (96.4%) either agreed or strongly agreed with all eight questionnaire statements related to engagement in leadership roles. Likewise, teachers who only strongly agreed with the statement (51.8) strongly agreed with all eight questionnaire statements related to engagement in leadership roles. In summary, third year teachers who either agreed or strongly agreed they had the potential to become a leader believed that they were currently engaged in leadership roles as identified by literature reviewed for novices, which included:

- developing teaching expertise,
- becoming more confident in teaching abilities,
- sharing teaching practices,
- reflecting on teaching and learning,
- increasing teaching effectiveness and professionalism,
- furthering professional learning,

- observing other teachers,
- having mentoring conversations.

Third year teachers who believed they have the potential to become a teacher leader seem to be engaged in the above leadership roles. These roles are either intentionally included in district induction programs or are naturally occurring for third year teachers.

There was high correlation and high statistical confidence between two groups of respondents to statement 10-9 (those who disagreed/strongly disagreed and those who agreed that they were currently teacher leaders) and how they ranked involvement in select teacher leadership roles. The two highest ranked questionnaire statements associated with engagement in teacher leadership roles (by novices who disagreed/strongly disagreed and those who agreed that they had the potential to become a teacher leader) included:

- becoming more confident in teaching abilities,
- increasing teaching effectiveness and professionalism.

However, questionnaire participants who strongly agreed that they were currently teacher leaders ranked the following engagement in teacher leadership roles highest (three ties in mean rankings):

- developing teaching expertise,
- becoming more confident,
- observing other teachers.

Third year teachers who either agreed or strongly agreed with the statement, “I feel that I am currently a teacher leader” (76.8%) either agreed or strongly agreed with all eight questionnaire statements (listed below) related to engagement in leadership roles. Likewise,

teachers who strongly agreed with the former statement (25%) strongly agreed with all eight questionnaire statements related to engagement in leadership roles. In summary, third year teachers who either agreed or strongly agreed they were currently teacher leaders believed that they were currently engaged in leadership roles as identified by literature reviewed for novices, which included:

- developing teaching expertise,
- becoming more confident in teaching abilities,
- sharing teaching practices,
- reflecting on teaching and learning,
- increasing teaching effectiveness and professionalism,
- furthering professional learning,
- observing other teachers,
- having mentoring conversations.

When third year teacher who participated in the study believed they were currently teacher leaders, they were indicating that they have opportunities to become engaged in leadership roles. It is intriguing to consider if leadership opportunities are part of a planned system of induction support or if this is naturally occurring as part of the educational system.

The findings associated with the third research question were consistent with the literature reviewed on novice teachers related to engagement in leadership roles. Third year teachers who believed they had the potential to become a leader or believed they were currently a leader also indicated they were involved in teacher leadership roles, as defined by the study. According to the research, novices begin as instructional leaders with their students; a novice

teacher's natural first step into leadership is developing their teaching expertise and confidence (Bond, 2011). As expertise in teaching continues to develop, teachers become more confident and are more likely to engage and share their work with colleagues (Carver & Meier, 2013). Teacher leadership frequently evolves from teachers' work in their own teaching. When novice teachers are part of collaborative and collegial interactions, they are engaged in teacher leadership, or "...the ability to engage colleagues in experimentation and then examination of more powerful instructional practices in the service of more engaged student learning" (Lemlech & Hertzog, 1998).

When presented with the concept of new teachers as teacher leaders, new teachers, principals, and induction leaders are often surprised that this is a possibility. In many instances, they picture teacher leaders as instructional coaches and those headed for district leadership positions such as principals or curriculum directors. In the study, the aforementioned definitions of teacher leadership roles from literature reviewed caused pause in new teachers and district leaders. They soon realize that when teacher leadership roles for new teachers involve developing expertise, becoming more confident, engaging with colleagues to reflect, share ideas, develop effectiveness and professionalism, and taking opportunities to observe other teachers and engage in mentoring conversations, the idea of new teachers as leaders is achievable. Overall, third year teachers surveyed, who believed they had the potential to become leaders or believed they were currently leaders, indicated that they were engaged in leadership roles as defined by the literature.

Research question four. To what degree do novice teachers report that their engagement in leadership opportunities benefits them and their school districts? Research question four

focused on the benefits of new teachers engaging in leadership in their first three years of teaching. When novice teachers engage in teacher leadership activities, students, colleagues, administrators, parents and districts experience a myriad of benefits (Lambert, 2003; Carver & Meier, 2013; Feiman-Nemser, 2001; School Leadership for the 21st Century Initiative, 2001).

Research question four, presented in Chapter four, analyzed correlations of relationships and statistical confidence among ranks of means from three groups (based on responses to (Q 10-8) “I feel that I have the potential to become a teacher leader” and (Q10-9) “I feel I am currently a teacher leader” related to “benefits of teacher leadership” (Q12, 1-18 questionnaire statements) for third year teachers. Analysis of data indicated there was high statistical confidence among the three groups of respondents to statement 10-8 (those who disagreed/strongly disagreed, agreed, and strongly agreed that they had potential to be a teacher leader) and how they ranked benefits from teacher leadership. However, there was no strong correlation among the three groups and how they ranked benefits from teacher leadership, although there the correlation between those who disagreed/strongly disagreed and those who either agreed or strongly agreed that they had the potential to be a teacher leader was negative.

The highest consistently ranked questionnaire statements associated with benefits of teacher leadership by respondents who either agreed or strongly agreed that they had the potential to become a teacher leader included:

- observing peers teaching and having mentoring conversations,
- engaging in professional conversations to deepen knowledge.

These results seem to connect with the work that I am engaged in through St. Cloud State University’s Ignite Center. We provide an instructional coaching program for new teachers

where they have opportunities to observe veteran teachers and have mentoring conversations. In our research, new teachers cite that they value these observations and learn from their colleagues. Likewise, new teachers inform us that they appreciate networking at our new teacher workshops and value conversations with new and veteran teachers.

Third year teachers who either agreed or strongly agreed with the statement, “I feel that I have the potential to become a teacher leader” (96.4%) either agreed or strongly agreed with all twelve questionnaire statements related to benefits of teacher leadership (listed below). In summary, third year teachers who either agreed or strongly agreed they had the potential to become a leader perceived the following benefits exist when novice teachers were engaged in leadership:

- advancing their teaching career,
- engaging with colleagues to share professional ideas,
- increasing their teaching expertise and confidence,
- career-long learning,
- observing peers teaching and having mentoring conversations,
- being energized by engaging with colleagues,
- acquiring inspiration by collaborating with colleagues,
- making a difference for other teachers,
- impacting the professional culture of building,
- engaging in professional conversations to deepen knowledge,
- developing a stronger sense of self as a contributing member,
- participating in the improvement of teaching and learning.

Analysis of data indicated there was no high correlation or statistical confidence among the three groups of respondents to statement 10-9 (those who disagreed/strongly disagreed, agreed, and strongly agreed that they were currently teacher leaders) and how they ranked benefits from teacher leadership. However, the three highest ranked questionnaire statements associated with benefits of teacher leadership by these respondents included:

- observing peers teaching and having mentoring conversations,
- impacting the professional culture of building,
- engaging in professional conversations to deepen knowledge.

The two highest ranked questionnaire statements associated with benefits of teacher leadership by respondents who strongly agreed that they were currently teacher leaders included:

- observing peers teaching and having mentoring conversations,
- acquiring inspiration by collaborating with colleagues.

Third year teachers who either agreed or strongly agreed with the statement, “I feel that I am currently a teacher leader” (76.8%) either agreed or strongly agreed with all twelve questionnaire statements related to benefits of teacher leadership:

- advancing their teaching career,
- engaging with colleagues to share professional ideas,
- increasing their teaching expertise and confidence,
- career-long learning,
- observing peers teaching and having mentoring conversations,
- being energized by engaging with colleagues,
- acquiring inspiration by collaborating with colleagues,

- making a difference for other teachers,
- impacting the professional culture of building,
- engaging in professional conversations to deepen knowledge,
- developing a stronger sense of self as a contributing member,
- participating in the improvement of teaching and learning.
- acquiring inspiration by collaborating with colleagues.

The findings associated with the fourth research question were consistent with the literature reviewed on benefits that exist when novice teachers were engaged in leadership. Third year teachers who believed they had the potential to become a leader or believed they were currently a leader also indicated there were benefits to novice teachers and the school districts where they worked. According to literature reviewed, of the many benefits that teacher leadership brings, one that has career-long outcomes for teachers and the entire system is that of school improvement (Lambert, 2003). In addition to school improvement, teacher leadership is increasingly regarded as strategic to re-culturing school for increased student achievement (Carver & Meier, 2013). “As teachers learn to talk about teaching in specific and disciplined ways and to ask hard questions of themselves and others, they create new understandings and build a new professional culture” (Feiman-Nemser, 2001, p. 1043). Lastly, when teacher leadership is part of a school culture, schools become more democratic so that the entire system benefits (School Leadership for the 21st Century Initiative, 2001).

Even though the three groups’ mean rankings of their responses to various benefits to teacher leadership didn’t highly correlate, 96.4% of those who either agreed or strongly agreed they have the potential to be a teacher leader and 76.8% of those who either agreed or strongly

agreed they were currently teacher leaders either agreed or strongly agreed with all twelve questionnaire statements related to benefits of teacher leadership. These third year teachers seemed to believe that when new teachers engaged in teacher leadership, benefits existed to them, their students, and the schools and districts where they taught.

Study Limitations

“Limitations are particular features of your study that you know may negatively affect the results or your ability to generalize” (Roberts, 2010, p.162). Following are factors that affected the research and were out of my control:

1. In Minnesota, only one-third of the school districts offer at least two years of induction programming for their new teachers, which was one of the criteria for participation in the research.
2. Of the districts in which there were at least two years of induction programming, there were two limitations to securing agreement from school district leaders for their districts’ participation in the study:
 - I utilized staff development reports on the Minnesota Department of Education’s website to locate school districts that reported providing a minimum of two years of induction programming for their new teachers. When contacted, five districts related that, in fact, they did not have two years of induction programming in place, even though they indicated otherwise on their MDE reports.
 - When I contacted Minnesota school districts in which there were two years of induction programming in place, five districts declined to participate in the

research citing various reasons such as the time commitment for their new teachers to complete the questionnaire, other district commitments, and small numbers of district third year teachers to contribute to statistical reliability.

3. There was a low number of third year teachers who had completed two prior years of teaching. I was not in a position to accurately estimate the number of experienced teachers Minnesota school district leaders have hired in recent years. There were 189, third year teachers who initiated the questionnaire, however 104 were excluded from completing the questionnaire, primarily because they had more teaching experience than a true third year teacher.

Recommendations for Implementation

Induction leaders and principals. The following recommendations are presented based on study findings and conclusions, and may be considered instrumental to the creation of a teacher leadership pathway for novice teachers for induction leaders (higher education and P-12) and P-12 principals:

1. Research reviewed reported that comprehensive induction programs accelerate the effectiveness of teachers in having an impact on students. In planning induction programming, district leaders should consider:
 - creating a comprehensive plan for supporting new teachers for at least two years, and ideally three years. To understand components that comprise comprehensive induction, see page 51.
 - planning for a systematic leadership pathway throughout induction programming (discussed further in #2 below)

- treating all new teachers as leaders from their first day of employment, and continue to communicate about how this will occur and the benefits accrue to stakeholders.
2. In the study, the majority of third year teachers who participated in two years of induction programming believed they were developing their leadership skills.

Induction leaders and principals should:

- consider those qualities they desire finished third year teachers to demonstrate as leaders. Then back-map those proficiencies into the induction programming so leadership skills are being developed throughout. According to research reviewed, developing leadership can include new teachers doing the following:
 - learning from other teachers,
 - being supported by other teachers,
 - believing that their principals regard all teachers as leaders,
 - agreeing that their school culture encourages leadership for all teachers,
 - perceiving that their principals support them as leaders,
 - being provided with time to build teacher leadership skills,
 - being provided with opportunities to build collaboration skills.
3. The majority of third year teachers who had participated in two years of induction programming believed they possessed select leadership attributes that reviewed research expects of novices.

- Induction leaders and principals should be aware of these leadership attributes so they can identify whether potential candidates for teaching positions either already possess them or have the potential to develop them. Attributes for leadership in new teachers include/d:
 - communication skills,
 - improvement of teaching practice,
 - confidence in teaching,
 - problem-solving abilities,
 - independence,
 - flexibility,
 - optimism.
4. Most third year teachers who had participated in two years of induction programming believed they were engaging in leadership roles that would be expected of a new teacher.
- Induction leaders and principals should be aware of the leadership roles that they expect from new teachers. According to research reviewed, many district leaders have a narrow view of leadership and assume it means that teachers are becoming instructional coaches, principals, curriculum directors, or the like. In contrast, leadership roles for new teachers can included:
 - developing expertise,
 - becoming more confident,
 - sharing teaching practices,

- reflecting on teaching and learning,
 - increasing teaching effectiveness and professionalism,
 - furthering professional learning,
 - observing other teachers,
 - having mentoring conversations.
5. The study determined that most third year teachers who had participated in two years of induction programming believed there were benefits for them and their districts when they engaged in leadership.
- Induction leaders and principals should be aware of the benefits of new teachers engaging in leadership roles so they can communicate those to the district stakeholders, including new teachers. There are various benefits for new teachers and the district when leadership is a component of induction programming. Those benefits included new teachers:
 - advancing their teaching career,
 - engaging with colleagues to share professional ideas,
 - increasing teaching expertise and confidence,
 - engaging in career-long learning,
 - observing peers teaching and having mentoring conversations,
 - being energized by engaging with colleagues,
 - acquiring inspiration by collaborating with colleagues,
 - making a difference for other teachers,
 - impacting professional culture of building,

- engaging in professional conversations to deepen knowledge,
 - developing a stronger sense of self as a contributing member,
 - participating in the improvement of teaching and learning.
6. It is recommended that school district leaders develop or continue to support preferably three years, of induction support for new teachers. In doing so, it appeared that teacher leadership is being developed in novice educators as they progressed through comprehensive programming. Research reviewed found many barriers to developing leadership in novice teachers. Either district leaders have overcome these barriers or leadership development is naturally occurring in comprehensive induction programming and is not being named or recognized.

University teacher education faculty members. The following recommendations may be considered regarding creation of a teacher leadership pathway for novice teachers at the pre-service/university level. Because teachers are expected to lead on the first day of their career, building leadership skills should begin to be developed during pre-service training. The following are study implications of and recommendations for pre-service training development.

1. Novice teachers are encouraged to consider building their teacher leadership skills in their pre-service programs. Faculty members can create these opportunities by:
 - Weaving teacher leadership skills into all teacher preparation courses.
 - Requiring pre-service educators to reflect on teacher leadership attitudes, personal visions, and beliefs throughout their pre-service experiences.
 - Giving opportunities for pre-service teachers to volunteer in the educational field so that they are serving and learning the values connected with leadership.

- Encouraging participation in professional organizations to develop leadership skills and learn to lead at the local level.
- Assisting pre-service candidates to acquire the skills of understanding others, knowing schools and organizational contexts; delivering high quality instruction; and striving to be a career long learner.

Recommendations for Future Research

Several topics for further research have been identified from the findings of the study. The following are recommendations and shared lessons-learned for future researchers, gleaned through the research process:

1. A significant limitation of the study was the low number of true, third year teachers (completed two years of teaching and in the middle of their third year of teaching overall) who completed two years of induction programming. A further study could be undertaken to compare those teachers described above to third year teachers who either have had no induction support and/or those who have one year of support. This would increase the number of teachers involved and would be an interesting comparison study.
2. Future research may be considered to conduct a case study comparing novice teachers, principals, induction leaders, and/or university faculty members' perceptions regarding teacher induction and teacher leadership.
3. A study could be conducted to compare essential elements of comprehensive induction programs (of which teacher leadership is one component) with actual practice in P-12 school districts.

4. Literature reviewed discussed Moir and Bloom's (2003) "Phases of First Year Teacher's Attitude Towards Teaching." Future researchers might consider conducting a study to gather data on Minnesota teachers' perceptions of progressing through these discussed phases, and the relation to induction programming and teacher leadership.

Study Summary

In research reviewed, teacher leadership was defined as "mobilizing the still largely untapped attributes of teachers to strengthen student performance at ground level and working toward real collaboration, a locally tailored kind of shared leadership, in the daily life of the school" (School Leadership for the 21st Century Initiative, 2001, p. 4). In addition, the research discussed knowledge to eradicate barriers when creating a teacher leadership pathway. These obstacles include current system structures and beliefs of administrators regarding the idea of novice teachers as leaders; these barriers include some administrators' belief that only a few privileged educators should attain leadership, while novice teachers fail to view themselves as leaders or assume positions of leadership.

In addition to identifying barriers, a review of research found that there are ways to cultivate leadership in novice teachers, skill sets that can be nurtured, and leadership practices that novice teachers can attain. Further, a teacher leadership pathway for novice teachers has many benefits for school systems, with school improvement at the forefront. Lastly, several global recommendations are documented for consideration when building induction programs that include teacher leadership.

Given information gleaned from the literature review, it is clear that most induction programs neglect to include a leadership pathway for novice teachers, often times preparing teachers for survival when schools are complex and in need of constant reform (Moir & Gless, 2001). Instead, these programs must also have as part of their vision a new image of the successful teacher whose leadership capacity is developed from the moment the teacher enters a classroom. Induction programs have the potential to become one of the most powerful forces for educational change and professional renewal in the history of public education. The opportunity is there, and the most effective programs will be those that clearly recognize this potential (Moir & Gless, 2001, p. 111).

Lambert (2003) implored school leaders to consider their own assumptions, and their language and beliefs about teacher leadership. Leadership needs to move beyond administrators and include all teachers—even beginning teachers—to have an impact on school improvement (Bond, 2011). “It’s time for district leaders, preparation programs, and policymakers to take action that builds the leadership capacity of teachers and administrators—and does so in the best interests of students and tomorrow’s schools” (Berry, 2014, p. 4).

The purpose of the study was to examine novice teachers’ awareness, beliefs, and perceptions regarding inclusion of and participation in a teacher leadership pathway. I sought to investigate the manner in which teacher leadership is developed and attributes novices perceive they possess. In addition, novice teachers were invited to identify teacher leadership roles and opportunities in which they were engaged and the benefits of them. As summarized in the literature review, induction programmers must develop the capacity for novice teachers to become leaders from the first day of teaching and well into their experienced years (Moir &

Gless, 2001). Leadership needs to extend beyond administrators and include all teachers—even beginning teachers—to have an impact on school improvement (Bond, 2011).

The study is an important contribution to existing research on teacher induction and new teacher support. While the research reviewed indicated that teacher leadership should be an essential focus in supporting novice teachers, it also identified many barriers to the carrying out of that focus. Additionally, literature reviewed revealed a general lack of knowledge among educators of teacher leadership, specifically of the benefits, resulting in the exclusion of a pathway to leadership in induction programming by many districts.

The study data were collected from third year teachers who completed two years of prior teaching, and were supported for at least two years through induction programming. Schools participating in the study were selected from staff development reports on the Minnesota Department of Education website and based on their indication that district leaders provided at least two years of induction programming.

Findings from the study reported that 97% of third year teachers believed they have the potential to be a teacher leader. And, 76.8% of third year teachers believed they were currently a teacher leader. I compared those groups of teachers with how they responded to teacher leadership development, attributes, roles, and benefits questions. The majority of teachers surveyed either agreed or strongly agreed that they were being developed for leadership, had the attributes of a leader, were engaged in teacher leadership roles, and perceived benefits of leadership. Recommendations were provided to induction leaders and principals as well as university teacher education faculty members. The findings of the study resulted in

recommendations for additional research in induction programming and teacher leadership for pre-service and novice teachers.

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Appendix A: Framework and Survey Question Matrix

Developing Leadership Capacity in Novice Teachers (Theme 3)

Framework of Teacher Leadership Components	Citation	Survey Prompts
A. Cultivating Teacher Leadership-Professional Development		
Induction programs can provide opportunities for new teachers to learn from each other through peer coaching.	Fullan, 1993	1. I am provided with opportunities to learn from other teachers. 2. My principal and/or induction program leader has helped me improve my teaching practice (e.g., professional development, reflection, etc.). 3. I seek to improve my teaching practice throughout the year (e.g., professional development, reflection, etc.).
Skillful participation in a professional community increases leadership because “such work embraces a shared vision, inquiry, dialogue, reflection and a focus on learning.	Lambert, 2003	
Teachers who learn from each other are more likely to be leaders and so a learning community is at the center of a high leadership capacity school.	Lambert, 2003	
Career-long learning not only influences the novice teachers’ effectiveness in the classroom, but also places the educator on a pathway to leadership.	Fullan, 1993	
A. Cultivating Teacher Leadership-Supportive Culture		
Supportive colleagues acted like cheerleaders, setting high expectations and demanding strong performance, but also understanding when things didn’t go well.	Carver & Meier, 2013	4. Our school culture encourages leadership for all teachers. 5. I feel supported by other teachers (colleagues) with whom I work (e.g., they are encouraging, set high expectations, and understand when things do not go well).
Colleagues were often involved in co-planning and teaching and encouraged new teachers to be creative, which resulted in more confidence in the ability to be a teacher leader.	Carver & Meier, 2013	
In order to gain support from veteran teachers, novices described the need to position themselves as competent in front of everyone with which they interacted, from students to colleagues to administrators.	Carver & Meier, 2013	

Framework of Teacher Leadership Components	Citation	Survey Prompts
A. Cultivating Teacher Leadership-Teacher Leadership Knowledge, Skills, and Dispositions (Attributes)		
To prepare beginning teachers for (teacher leadership), teacher preparation programs must introduce the concept of teacher leadership in their courses and provide these novices with a mental framework for approaching teacher-related tasks and opportunities to develop as teacher leaders.	Bond, 2011	6. My teacher preparation program offered opportunities for pre-service teachers to be leaders (e.g., introduced in coursework, offered opportunities to volunteer, encouraged participation in professional organizations, etc.)
When assuming in-service positions, communication skills must be effective, as leaders regularly interact with others, share ideas, ask questions, discuss information and actively listen.	Bond, 2011	7. My principal and/or induction leader has helped me develop my communication skills (e.g., speaking, listening, writing, etc.) in order to interact with others more effectively. 8. I have strong communication skills (e.g., speaking, listening, writing, etc.).
Teacher leaders seek solutions to challenges, build confidence in others, and are reliable, truthful, open-minded, flexible, optimistic, resilient, and intrinsically motivated.	Bond, 2011	9. My principal or induction program leader has helped me build confidence in my teaching. 10. I feel confident sharing my expertise with colleagues.
When teacher leaders are encouraging and supportive of their colleagues, accept challenges, engage in decision-making, and believe they can make a difference in the school environment, they are more effective leaders.	Lemlech & Hertzog, 1998	11. My principal or induction program leader has helped me increase my problem-solving abilities (e.g., identify problem, seek solutions to challenges, etc.). 12. I am comfortable problem-solving when there are challenges (e.g., identify problem, seek solutions to challenges, etc.). 13. My principal or induction program leader has helped me increase my independence. 14. I am independent most of the time. 15. My principal or induction program leader has helped me increase my flexibility (e.g., ability to change when there are challenges). 16. I am flexible when the situation does not go my way or as planned. 17. My principal or induction program leader has helped me increase my optimism (e.g., look for the positive in situations). 18. I am optimistic most of the time (look for the

Framework of Teacher Leadership Components	Citation	Survey Prompts
		positive in situations)
A. Cultivating Teacher Leadership-All Teachers as Leaders		
Education has evolved to support an inclusive view that all teachers have the potential to lead, including novice teachers	Carver & Meier, 2013	19. I believe my principal regards all teachers as leaders, including new teachers.
A. Cultivating Teacher Leadership-Time to Succeed as Leaders		
Novice teachers require time to succeed as teacher leaders, but often are not afforded this necessity.	Berry, 2014	20. My building principal supports me as a teacher leader (e.g., offers time for leadership activities, believes I am a leader, creates structures for collaboration, etc.) 21. I am provided with time to build teacher leadership skills (e.g., take part in ongoing professional development; build leadership knowledge, skills, and dispositions; collaborate with colleagues; increase teaching expertise, etc.)
Unfortunately, even in 2014, school schedules allow little time for teachers to design and lead lesson studies, conduct action research, launch virtual learning communities, advance school-community partnerships, and develop and score new student assessments.	Berry, 2014	
District should reduce teachers' loads and free up their time to incubate and execute their own ideas and advance their profession.	Berry, 2014	
A. Cultivating Teacher Leadership-Collaboration with Colleagues		
A significant element in the development of leadership includes collaboration or "...the notion of learning together, and the construction of meaning and knowledge collectively and collaboratively.	Harris and Lambert, 2003	22. I am provided with opportunities to build my collaboration skills (e.g., skills for working with colleagues, such as reciprocal observations and peer coaching, learning from each other, etc.)
Such leadership allows opportunities to surface and it mediates perceptions, values, beliefs, information and assumptions through continuous conversations.	Harris and Lambert, 2003	
B. Identifying and Creating Roles and Opportunities-Teaching Expertise and Confidence		

Framework of Teacher Leadership Components	Citation	Survey Prompts
Because novices begin as instructional leaders with their students, a natural first step is developing their teaching expertise and confidence.	Bond, 2011	<ol style="list-style-type: none"> 1. I have been developing my teaching expertise consistently since beginning my career. 2. I have become more confident in my teaching abilities since beginning my career.
B. Identifying and Creating Roles and Opportunities-Engagement with Colleagues to Dialogue		
<p>When novice teachers are part of collaborative and collegial interactions, they are engaged in teacher leadership, or the ability to engage colleagues in experimentation and then examination of more powerful instructional practices in the service of more engaged student learning.</p> <p>Sharing innovations and expertise with peers can occur informally or in more organized settings, such as in professional learning communities (PLCs).</p> <p>Teacher leadership for novice teachers begins and is sustained by conversations with team members, instructional coaches, administrators, and parents.</p>	<p>Lemlech & Hertzog, 1998</p> <p>Berry and Wieder, 2013</p> <p>Lambert, 2003</p>	<ol style="list-style-type: none"> 3. I take opportunities to engage with my teaching colleagues to share teaching practices, innovative ideas, resources, etc. 4. My teaching effectiveness is increased when I engage with my colleagues.
B. Identifying and Creating Roles and Opportunities-Engagement with Colleagues to Hone Reflection of Practice		
Engagement with teaching colleagues results in novice teachers reflecting and examining their teaching practices and developing their own efficacy and professionalism.	Lemlech & Hertzog, 1998	<ol style="list-style-type: none"> 5. I take opportunities to engage with my colleagues to reflect on my teaching and learning.
B. Identifying and Creating Roles and Opportunities-Engagement with Colleagues to Share Work		
As expertise in teaching continues to develop, teachers become more confident and are more likely to engage and share their work with colleagues.	Carver & Meier, 2013	(see number three above)
B. Identifying and Creating Roles and Opportunities-Engagement with Colleagues to Develop Efficacy and Professionalism		

Framework of Teacher Leadership Components	Citation	Survey Prompts
Engagement with teaching colleagues results in novice teachers reflecting and examining their teaching practices and developing their own efficacy and professionalism.	Lemlech & Hertzog, 1998	6. My professionalism is increased when I engage with my colleagues.
B. Identifying and Creating Roles and Opportunities-Career Long Learning		
Novice teacher leaders take part in career-long learning opportunities, engaging in various types of activities that build leadership skills throughout their careers.	Fullan, 1993	7. I take opportunities to further my professional learning.
Teacher leaders are agents for reform and thus life-long learners.	Fullan, 1993	
Career-long learning not only influences the novice teachers' effectiveness in the classroom, but also places the educator on a pathway to leadership.	Fullan, 1993	
B. Identifying and Creating Roles and Opportunities-Peer Observation with Reciprocal Mentoring		
Novice teacher leaders observe their peers and engage in reciprocal mentoring.	Berry, 2014	8. I take opportunities to observe other teachers and engage in mentoring conversations.
What if teacher-evaluation systems placed a premium on teachers' ability to spread effective practices among colleagues within and beyond their schools?	Berry, 2014	
Administrators should provide more opportunities for novices to engage in peer observation, followed by reciprocal mentoring where educators exchange high-quality feedback in instruction and student learning-all building teacher leadership skills and advancing the practice of teaching.	Berry, 2014	
C. Communicating Benefits –Novice Teacher Advancement		
Novice teachers who engage in professional discourse	Feiman-Nemser, 2001	1. When I engage in professional conversations, it

Framework of Teacher Leadership Components	Citation	Survey Prompts
<p>deepen knowledge of curriculum, sharpen questioning skills and become critical thinkers.</p> <p>Over time, they develop a stronger sense of themselves as practical intellectuals, contributing members of the profession, and participants in the improvement of teaching and learning.</p>	Feiman-Nemser, 2001	<p>deepens my knowledge of curriculum, sharpens my questioning skills, and increases my critical thinking.</p> <p>2. As a teacher leader, I have developed a stronger sense of myself as a contributing member of the profession.</p> <p>3. As a teacher leader, I have developed a stronger sense of myself as a participant in the improvement of teaching and learning.</p> <p>4. Because I have been offered and engaged in teacher leadership opportunities (e.g. build my expertise and confidence, engage with colleagues; further my professional learning; observe other teachers, etc.), I feel I am advancing my teaching career.</p>
C. Communicating Benefits-Democratic School Culture		
<p>When teacher leadership is part of a school culture, schools become more democratic and the entire system benefits.</p> <p>The more democratic a school culture, the more students come to believe in, practice, and sustain our democratic form of governance.</p>	<p>Report of the Task Force on Teacher Leadership, 2001</p> <p>Report of the Task Force on Teacher Leadership, 2001</p>	<p>5. When I engage with my colleagues to share professional ideas, hone reflective practice, increase my effectiveness, and/or dialogue, school leadership and responsibility is shared.</p> <p>6. When I increase my teaching effectiveness and confidence, school leadership and responsibility is shared.</p> <p>7. When I am a career-long learner, school leadership and responsibility is shared.</p> <p>8. When I am able to observe peers teaching and have mentoring conversations, school leadership and responsibility is shared.</p>
C. Communicating Benefits-School Improvement		
Teacher leaders are energized by working with their	Lambert, 2003	9. When I engage with my colleagues, I am

Framework of Teacher Leadership Components	Citation	Survey Prompts
<p>colleagues and find inspiration in the daily challenges of teaching and school improvement.</p> <p>A teacher leader may be seen as a person in whom the dream of making a difference has been kept alive, or has been reawakened by engaging colleagues and a professional culture.</p>	Lambert, 2003	<p>more energized.</p> <p>10. When I collaborate with my colleagues, I find inspiration in daily challenges.</p> <p>11. When I am involved in leadership, I am making a difference for other teachers.</p>
C. Communicating Benefits-Re-Culturing Schools		
<p>Teacher leadership is increasingly regarded as strategic to reculturing schools for increased student achievement.</p> <p>As teachers learn to talk about teaching in specific and disciplined ways and to ask hard questions of themselves and others, they create new understandings and build a new professional culture.</p>	<p>Carver & Meier, 2013</p> <p>Feiman-Nemser, 2001</p>	<p>12. When I am involved in leadership, there is a positive impact on the professional culture of the school building.</p>

Appendix B: Online Study Survey



Appendix B: Online Survey “Perceptions of Novice Teachers Regarding Teacher Induction and Teacher Leadership”

Informed Consent

Procedures

You are invited to complete a short survey regarding your perceptions about the support you have received as a new teacher and its impact on teacher leadership.

Research Use and Results

The assessment data from this project will be useful for understanding and predicting how the support you have received as a new teacher has impacted your growth and development as a teacher leader.

Benefits

The results of this survey will be published to better understand induction programs and their impact on the development of teacher leadership in new teachers. The districts that participate in the study will be able to use the research to impact the development of induction programs, new teachers, and teacher leaders.

Contact Information

Upon completion, the researcher's dissertation will be electronically available for you to review the results. Please contact Beth Mann at bjmann@stcloudstate.edu if you have questions or want a written summary of this research.

If you have any additional questions please contact the researcher's (Beth Mann) advisor, Dr. John Eller, at jfeller@stcloudstate.edu.

Confidentiality

The confidentiality of the information gathered during your participation in this study will be maintained. Your personal identity will remain confidential. You will not be identified by your name in any published materials. Your specific school district will not be identified in the study. All printed data will be kept in a locked file cabinet in a locked room and/or on a computer secured with a password. This data will be destroyed within three years.

Risk

There are no serious risks associated with this evaluation/research study. I will carefully maintain the confidentiality of your responses and will not share your data with any district officials—in fact, I will not release any information that would allow any individual to be identified.

Voluntary Participation/Withdrawal

Your participation in this study is voluntary. You may decide not to participate or to withdraw your consent to participate in this study at any time, for any reason, without penalty. Your decision whether or not to participate will not affect your current or future relations with St. Cloud State University or the researcher. Please remember this information is confidential and is designed to better understand induction programs and their impact on the development of teacher leadership in new teachers. If you decide to participate, you are free to withdraw at any time without penalty.

Acceptance to Participate in the study

Your completion of this survey indicates that you are at least 18 years of age, you have read the information provided above, and you have given consent to participate.

* 1. I agree to participate in this study having read and understood the above consent form.

☐

Yes

☐

No



Perceptions of Novice Teachers Regarding Teacher Induction and Teacher Leadership

Note: This survey will take less than 10 minutes to complete.

Directions: Please select the response that best describes you.



Perceptions of Novice Teachers Regarding Teacher Induction and Teacher Leadership

* 2. Gender

☐

Female

☐

Male

* 3. School District



Perceptions of Novice Teachers Regarding Teacher Induction and Teacher Leadership

* 4. Select the response that best describes your total years of **completed** full-time teaching (**meaning you have finished an academic year**):

- ☐ Third year teacher with a **total of two years of completed (finished the academic year)** teaching - **you are a true third year teacher.**
- ☐ Third year teacher in current district, but with **more than two years of completed (finished the academic year)** teaching - **you are a third year teacher in your district who came to the district with experience, so you have more than 3 years of experience.**



Perceptions of Novice Teachers Regarding Teacher Induction and Teacher Leadership

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* 5. I have participated in two years of an induction program (support for new teachers) in my current district

☐ Yes

☐ No

!

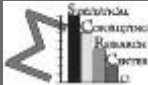
6



Perceptions of Novice Teachers Regarding Teacher Induction and Teacher Leadership

* 6. In the past two years of teaching in your current district, and including this third year, please select all grade levels taught:

- ☐ Early Childhood
- ☐ Elementary (K-3)
- ☐ Elementary (in an elementary building) 5-8
- ☐ Middle School (if in a middle school building) 5-8
- ☐ High School (9-12)



Perceptions of Novice Teachers Regarding Teacher Induction and Teacher Leadership

7. Current teaching assignment (science, third grade, special education, etc.)

* 8. Level of education

- ☐ Bachelor's Degree
- ☐ Master's Degree
- ☐ Other (please specify)



Perceptions of Novice Teachers Regarding Teacher Induction and Teacher Leadership

For the purpose of this study, the following are helpful definitions.

Teacher leadership for novice (new) teachers is not about a pathway to becoming a principal or curriculum director, but increasing novices' expertise and confidence, engaging with and observing colleagues, and becoming career-long learners to have an impact on student learning.

"Induction is a process-a comprehensive, coherent, and sustained professional development process-that is organized by a school district to train, support, and retain new teachers and seamlessly progresses them into a lifelong learning program" (Wong, 2004, p. 42).

- * 9. Teacher leadership can be developed in novice teachers starting in teacher preparation programs and throughout the first years of teaching through induction programs. Please select the response that best describes **your** experience with the development of teacher leadership.

Strongly Disagree Disagree Agree Strongly Agree Not Applicable

My **teacher preparation program** offered opportunities for pre-service teachers to be leaders (e.g., introduced in coursework, offered opportunities to volunteer, encouraged participation in professional organizations, etc.).

☐ ☐ ☐ ☐ ☐

* 10. The remainder of the prompts are related to your experiences after completing two years of teaching and being supported in an **induction program**.

	Strongly Disagree	Disagree	Agree	Strongly Agree	Not Applicable
I am provided with opportunities to learn from other teachers.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel supported by other teachers (colleagues) with whom I work (e.g., they are encouraging, set high expectations, and understand when things do not go well).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I believe my principal regards all teachers as leaders, including new teachers.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Our school culture encourages leadership for all teachers.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My building principal supports me as a teacher leader (e.g., offers time for leadership activities, believes I am a leader, creates structures for collaboration, etc.).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am provided with time to build teacher leadership skills (e.g., take part in ongoing professional development; build leadership knowledge, skills, and dispositions; collaborate with colleagues; increase teaching expertise, etc.).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am provided with opportunities to build my collaboration skills (e.g., skills for working with colleagues, such as reciprocal observations and peer coaching, learning from each other, etc.).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel that I can and have the potential to become a teacher leader.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel that I am currently a teacher leader.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Perceptions of Novice Teachers Regarding Teacher Induction and Teacher Leadership

For the purpose of this study, the following are helpful definitions.

Teacher leadership for novice (new) teachers is not about a pathway to becoming a principal or curriculum director, but increasing novices' expertise and confidence, engaging with and observing colleagues, and becoming career-long learners to have an impact on student learning.

"Induction is a process-a comprehensive, coherent, and sustained professional development process-that is organized by a school district to train, support, and retain new teachers and seamlessly progresses them into a lifelong learning program" (Wong, 2004, p. 42).

* 11. Particular attributes exist that are associated with teacher leadership. Please select the response that best describes **your** experience with the development of teacher leadership attributes.

	Strongly Disagree	Disagree	Agree	Strongly Agree	Not Applicable
My principal and/or induction program leader has helped me develop my communication skills (e.g., speaking, listening, writing, etc.) in order to interact with others more effectively.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have strong communication skills (e.g., speaking, listening, writing, etc.).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My principal and/or induction leader has helped me improve my teaching practice (e.g., professional development, reflection, etc.).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I seek to improve my teaching practice throughout the year (e.g., through professional development, reflection, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My principal and/or induction program leader has helped me build confidence in my teaching.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel confident in sharing my expertise with colleagues.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My principal and/or induction program leader has helped me increase my problem-solving abilities (e.g., identify problem, seek solutions to challenges, etc.).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am comfortable problem-solving when there are challenges (e.g., identify problems, seek solutions to challenges, etc.).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My principal and/or induction program leader has helped me increase my independence.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am independent most of the time.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My principal and/or induction program leader has helped me increase my flexibility (e.g., ability to change when there are challenges).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am flexible when the situation does not go my way or as planned.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My principal and/or induction program leader has helped me increase my optimism (e.g., look for the positive in situations).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am optimistic most of the time (e.g. look for the positive in situations).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



Perceptions of Novice Teachers Regarding Teacher Induction and Teacher Leadership

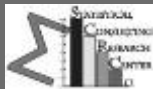
For the purpose of this study, the following are helpful definitions.

Teacher leadership for novice (new) teachers is not about a pathway to becoming a principal or curriculum director, but increasing novices' expertise and confidence, engaging with and observing colleagues, and becoming career-long learners to have an impact on student learning.

"Induction is a process-a comprehensive, coherent, and sustained professional development process-that is organized by a school district to train, support, and retain new teachers and seamlessly progresses them into a lifelong learning program" (Wong, 2004, p. 42).

- * 12. There are various teacher leadership roles with which new teachers may become involved. Please select the response that best describes **your** experience with being offered opportunities to becoming engaged in various teacher leadership roles and the degree of this engagement.

	Strongly Disagree	Disagree	Agree	Strongly Agree	Not Applicable
I have been developing my teaching expertise consistently since beginning my career.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have become more confident in my teaching abilities since beginning my career.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I take opportunities to engage with my teaching colleagues to share teaching practices, innovative ideas, resources, etc.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I take opportunities to engage with colleagues to reflect on my teaching and learning.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My teaching effectiveness is increased when I engage with my colleagues.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My professionalism is increased when I engage with my colleagues.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I take opportunities to further my professional learning.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I take opportunities to observe other teachers and engage in mentoring conversations.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



Perceptions of Novice Teachers Regarding Teacher Induction and Teacher Leadership

For the purpose of this study, the following are helpful definitions.

Teacher leadership for novice (new) teachers is not about a pathway to becoming a principal or curriculum director, but increasing novices' expertise and confidence, engaging with and observing colleagues, and becoming career-long learners to have an impact on student learning.

"Induction is a process-a comprehensive, coherent, and sustained professional development process-that is organized by a school district to train, support, and retain new teachers and seamlessly progresses them into a lifelong learning program" (Wong, 2004, p. 42).

* 13. There are various benefits of new teachers engaging in teacher leadership. Please select the response that best describes **your** perception of benefits of teacher leadership for you and your school district.

	Strongly Disagree	Disagree	Agree	Strongly Agree	Not Applicable
Because I have been offered and engaged in teacher leadership opportunities (e.g., build my expertise and confidence; engage with colleagues; further my professional learning, observe other teachers, etc.), I feel I am advancing my teaching career.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I engage with my colleagues to share professional ideas, hone reflective practice, increase my effectiveness, and/or dialogue, school leadership and responsibility is shared.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I increase my teaching expertise and confidence, school leadership and responsibility is shared.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I am a career-long learner, school leadership and responsibility is shared.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I am able to observe peers teaching and have mentoring conversations, school leadership and responsibility is shared.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I engage with my colleagues, I am more energized.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I collaborate with my colleagues, I find inspiration in daily challenges.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I am involved in leadership, I am making a difference for other teachers.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I am involved in leadership, there is a positive impact on professional culture of the school building.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I engage in professional conversations, it deepens my knowledge of curriculum, sharpens my questioning skills, and increases my critical thinking.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
As a teacher leader, I have developed a stronger sense of myself as a contributing member of the profession.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
As a teacher leader, I have developed a stronger sense of myself as a participant in the improvement of teaching and learning.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Appendix C: District Request to Conduct Research

Appendix C: District Request to Conduct Research

Greetings, Superintendent _____,

I am conducting a research project to satisfy the requirements of my doctoral degree in Educational Administration and Leadership at St. Cloud State University and am seeking to survey third year teachers who have participated in two years of induction programming. I am researching the perceptions of novice teachers regarding their participation in teacher induction and its impact on their teacher leadership. The assessment data from this project will be useful for understanding and predicting how the support that new teachers receive impacts their growth and development as a teacher leader. The districts that participate in the study will be able to use the research to impact the development of induction programs, new teachers, and teacher leaders. Upon completion, my dissertation will be available for personnel in participating districts to review the results.

I would appreciate including the Buffalo-Hanover-Montrose Schools in my research because it is one of a handful of districts in MN that offer at least two years of induction programming for new teachers. I didn't realize how few districts offer comprehensive support to their novices. In a report commissioned by the Minnesota Department of Education, only 33% of state school districts offer two-years induction programming and just 18% have three years of support. I don't know if you are familiar with the following research, but thought I would include it here as a testament to Buffalo-Hanover-Montrose's programming: "A federally funded randomized controlled trial of comprehensive teacher induction found that third year teachers who received two years of comprehensive induction support produced greater student learning gains compared to colleagues served by prevailing induction programs. For teachers who received only one year of comprehensive induction, there was no impact on student achievement." Consider your work with new teachers as best practice, innovative, and impactful!

Would you support sending (or identifying a district leader who can send) a future message (that I have created) with my survey link to the district's third year teachers so that they may participate in this study? The survey will take about 10 minutes to complete. If you agree to participation by your third year teachers, do I need to complete any district forms for my research?

Thank you for your consideration and I look forward to your reply.

Thank you,
Beth Mann

Appendix D: Message to District contacts with Survey Link

Appendix D: Initial Survey Link and Message to District Contacts

Greetings, _____,

Thank you once again for supporting my research in the _____ School District. I appreciate you forwarding the message below to your third year educators. If you can add a message of support, that may help with their participation.

In gratitude,

Beth Mann

Greetings, third year teachers,

This is Beth Mann and I am conducting a research project to satisfy the requirements of a doctoral degree in Educational Administration and Leadership at St. Cloud State University. I invite you to participate in a research study on the perceptions of third year educators regarding teacher induction (support for new teachers) and teacher leadership. You were selected as a possible participant because you are a third year teacher who has participated in two years of induction (or a support program for new teachers).





I greatly appreciate your participation and your perspective is very important to me! Please complete the survey by Friday, December 17. **The survey should take approximately 10 minutes to complete. Please click on the following link to begin the survey:** <https://www.surveymonkey.com/r/HSHMJW>

Thank you,

Beth Mann

!

Appendix E: Scanned Copy of IRB Consent Stamps and Signatures

	Institutional Review Board (IRB)										
OFFICE OF RESEARCH AND SPONSORED PROGRAMS ST. CLOUD STATE UNIVERSITY.	Administrative Services 210 Website: stcloudstate.edu/osp Email: osp@stcloudstate.edu Phone: 320-308-4932										
Name: Beth Mann		IRB PROTOCOL DETERMINATION: Exempt Review									
Address: 2460 35 St. N Sartell, MN 56377 USA											
Email: bjmann@stcloudstate.edu											
Project Title: Perceptions of Novice Teachers Regarding Teacher Induction and Teacher Leadership											
Advisor: John Eller											
The Institutional Review Board has reviewed your protocol to conduct research involving human subjects. Your project has been: APPROVED											
Please note the following important information concerning IRB projects:											
<ul style="list-style-type: none">- The principal investigator assumes the responsibilities for the protection of participants in this project. Any adverse events must be reported to the IRB as soon as possible (ex. research related injuries, harmful outcomes, significant withdrawal of subject population, etc.).- For expedited or full board review, the principal investigator must submit a Continuing Review/Final Report form in advance of the expiration date indicated on this letter to report conclusion of the research or request an extension.- Exempt review only requires the submission of a Continuing Review/Final Report form in advance of the expiration date indicated in this letter if an extension of time is needed.- Approved consent forms display the official IRB stamp which documents approval and expiration dates. If a renewal is requested and approved, new consent forms will be officially stamped and reflect the new approval and expiration dates.- The principal investigator must seek approval for any changes to the study (ex. research design, consent process, survey/interview instruments, funding source, etc.). The IRB reserves the right to review the research at any time.											
Good luck on your research. If we can be of further assistance, please contact the Office of Research and Sponsored Programs at 320-308-4932 or email lidonnay@stcloudstate.edu . Use the SCSU IRB number listed on any forms submitted which relate to this project, or on any correspondence with the IRB.											
Institutional Review Board:		St. Cloud State University:									
											
Linda Donnay IRB Administrator Office of Research and Sponsored Programs		Marilyn Hart Interim Associate Provost for Research Dean of Graduate Studies									
OFFICE USE ONLY											
<table border="1" style="width: 100%; border-collapse: collapse;"><tr><td style="width: 33%;">SCSU IRB# 1489 - 1844</td><td style="width: 33%;">Type: Exempt Review</td><td style="width: 33%;">Today's Date: 10/7/2015</td></tr><tr><td>1st Year Approval Date: 10/6/2015</td><td>2nd Year Approval Date:</td><td>3rd Year Approval Date:</td></tr><tr><td>1st Year Expiration Date: 10/5/2018</td><td>2nd Year Expiration Date:</td><td>3rd Year Expiration Date:</td></tr></table>			SCSU IRB# 1489 - 1844	Type: Exempt Review	Today's Date: 10/7/2015	1st Year Approval Date: 10/6/2015	2nd Year Approval Date:	3rd Year Approval Date:	1st Year Expiration Date: 10/5/2018	2nd Year Expiration Date:	3rd Year Expiration Date:
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1st Year Approval Date: 10/6/2015	2nd Year Approval Date:	3rd Year Approval Date:									
1st Year Expiration Date: 10/5/2018	2nd Year Expiration Date:	3rd Year Expiration Date:									
St. Cloud State University IRB Continuing Review / Final Report											
Principal Investigator: Beth Mann											
		 OFFICE OF RESEARCH AND SPONSORED PROGRAMS ST. CLOUD STATE UNIVERSITY.									

Institutional Review Board Protocol
For
Conduct of Research Involving Human Subjects

Office of Research and
Sponsored Programs
SEP 24 2015

PROJECT MANAGEMENT

Project Title: **Perceptions of Novice Teachers Regarding Teacher Induction and Teacher Leadership**

Project Summary (3-5 sentences, include method of data gathering): **I will be using a quantitative research design to survey P-12 third year novice teachers in Minnesota. The teachers will be surveyed on their perceptions of teacher leadership as an outcome of participation in two years of an induction program.**

Data Collection (note: must be a future date and allows sufficient time for IRB review)

Start Date: : **October 19, 2015**

Ending Date: **November 25, 2015**

Location of the Research: **Minnesota**

RESEARCHERS

Principal Investigator and Primary Contact (PI): **Beth Bergren-Mann**

Type of Research: ☐ faculty/staff ☐ undergraduate ☐ graduate masters ☒ graduate doctoral

Mailing Address: **2460 35 St N Sartell, MN 56377**

Telephone: **(320) 293-3501**

Email: **bjmann@stcloudstate.edu**

Advisor or Course Instructor (if PI is a student): **Dr. John Eller**

Co-PIs or Other Investigators:

If you collaborate with an individual from another institution, we may be able to use an Authorization Agreement to rely on our or their review. Contact the IRB Administrator for more information.

SPONSORS

Is there potential or confirmed external funding source(s) for this research project?

☒ No

☐ Yes

Funding Agency

Account #

CERTIFICATION STATEMENT

The undersigned acknowledge: 1) protocol represents a complete and accurate description of the proposed research, 2) research will be conducted in compliance with IRB recommendations and requirements, 3) research will not begin until IRB approval received, 4) modifications will not be made prior to obtaining IRB approval, 5) PI responsible for reporting to the IRB any adverse or unexpected events, 6) PI to report to IRB any significant new findings which develop during the course of the study or increase the risk to participants and 7) expedited or full IRB approval in effect for up to one year and PI is responsible to request continuing review or file final report (exempt review approval is exempt from the continuing review/final report process).

Principal Investigator Signature

Date

9-23-15

I have read the protocol, advised the student and support the research/study as appropriate for the student's academic development.

Advisor/Instructor Signature

Date

9/23/15